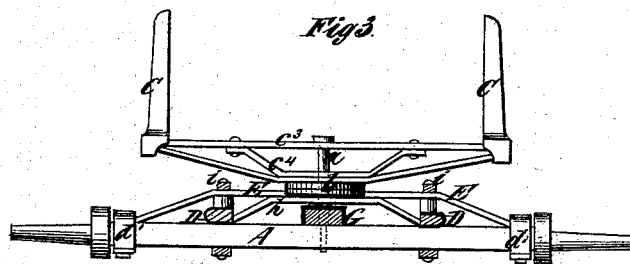
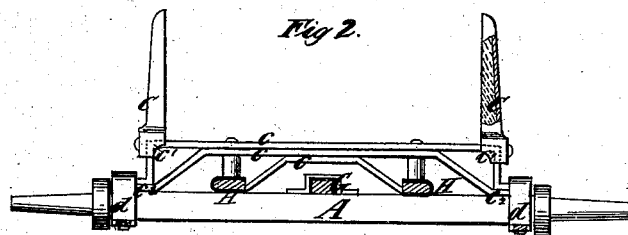
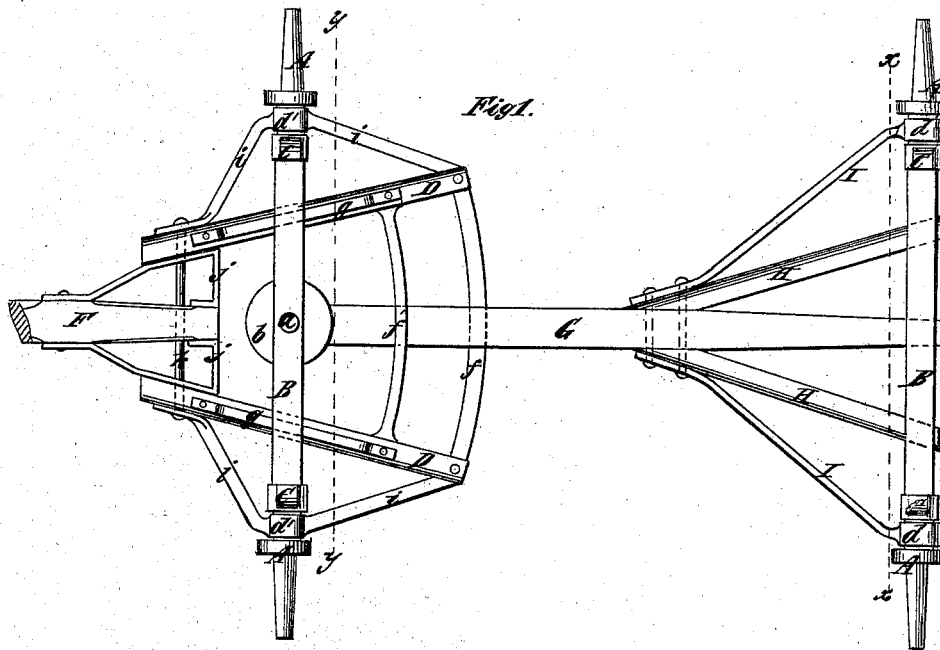


R. W. DAVIS.
Running-Gear for Wagons.

No. 214,633.

Patented April 22, 1879.



Witnesses:
Jno. Haynes
Edw. C. Jessup.

Inventor:
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UNITED STATES PATENT OFFICE.

ROBERT W. DAVIS, OF ELMIRA, NEW YORK, ASSIGNOR TO DAVIS IRON WHEEL COMPANY, OF SAME PLACE.

IMPROVEMENT IN RUNNING-GEARS FOR WAGONS.

Specification forming part of Letters Patent No. **214,633**, dated April 22, 1879; application filed January 30, 1879.

To all whom it may concern:

Be it known that I, ROBERT W. DAVIS, of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Wagon-Gears, of which the following is a specification.

The object of my invention is to produce a running-gear for a wagon or carriage which may be made very strong and durable and having a very light appearance.

My invention consists in a certain novel construction of the parts composing the running-gear of a wagon, consisting in the use of both wood and metal, whereby the desired end is attained.

In the accompanying drawings, Figure 1 represents a plan view of a wagon-gear of the kind usually employed in wagons for conveying heavy loads; Fig. 2, a transverse section thereof on the dotted line *xx*, Fig. 1; and Fig. 3, a transverse section on the dotted line *yy*, Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

A A designate the axles of a wagon-gear embodying my improvements, which may be of iron of the kind usually employed. These axles are each surmounted by a bolster, B, the one above the hind axle being secured rigidly thereto, while the forward bolster is pivoted by a king-bolt, *a*, to a pintle-plate, *b*, upon which it may freely turn. I construct these bolsters of iron, and may make them of the form represented in Figs. 2 and 3, as thereby the requisite amount of strength may be secured without using a large amount of material. As there represented, the hind bolster is formed of plates *c*, of metal, of different lengths, two or more of which may be used. The ends of each of these plates *c* are deflected or bent downward, so as to rest upon the top of the axle.

The longer plates are placed uppermost, and are bent so as to present angular corners *c'* and feet *c''*, which are secured to the axle by means of clips *d*, while the shorter ones may be secured by riveting, and serve as braces between the axle and the top plates of the bolster. The forward bolster is formed of a single piece of

thin metal, *c'*, having its two ends bent over and secured together, and a central brace, *c''*, for giving it the requisite strength.

Near each end of the bolsters B are stakes C, as in ordinary wagons. These stakes are composed of a metal shell and a wood filling. The metal shell is formed with a foot, having its sides and end prolonged below the upper plate of the bolster, the said foot resting upon the angular corners *c'*.

D D designate the hounds of the wagon. These are preferably straight, and are composed of a metal shell and wood filling. They are secured rigidly to the forward axle by means of rivets or bolts, and are provided at or near their rear ends with lateral arc-shaped braces *f f'*, which serve to prevent their displacement relatively to each other and with braces *g*, which aid in securing them to the axle.

The brace *f* is shown as having its ends inserted between the sides of the metal shells of the hounds, abutting against the wood filling, and secured in place by riveting or otherwise.

E designates a plate of metal, having its ends deflected or bent and resting upon the forward axle, to which they are secured by means of clips *d'*. A shorter plate, *h*, is secured between the plate E and the axle, and serves as a brace to bind the two firmly together. The plate E forms a support for the pintle-plate *b*, and serves as a means for securely holding the hounds D D, which may pass between it and the axle. The ends of each hound D are connected by braces *i*, which are securely held by the clips *d'*.

The pole F is represented as provided, upon its rear end, with a skeleton frame-work, *j*, of metal, and is secured between the hounds by a bolt or rod, *k*.

The forward and hind axles are shown as connected together by a reach, G, which is secured rigidly to the hind axle, and is secured to the forward axle by means of the king-bolt *a*. I preferably form this reach of a metal shell having a wood filling, as clearly represented in Figs. 2 and 3.

H H designate braces, which extend from each side of the reach G to the hind axle, and

which are represented as also formed of a shell or covering of metal filled with wood. I I designate metal braces, which extend from the reach, and are secured to the hind axle, near the ends thereof, by the clips *d*.

By my invention I produce a wagon-gear of great strength, and as the various parts are covered with metal, a fine smooth appearance is given them. The various parts of the wagon-gear may be painted and variously ornamented, as is usual when said gear is made of wood.

With slight modifications some or all of my improvements may be applied to wagons and carriages of various kinds.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The front bolster composed of the single plate or bar *c*³, having its two ends bent under

and secured together to form a bow, and the intermediate plate, *c*⁴, bent to form a brace, and secured between the bowed-under portion and the top plate of the bolster, substantially as described.

2. The combination, with the rear bolster, having the plate *c* bent at right angles to form vertical legs or supports, of the stakes *C*, having hollow feet resting upon and embracing the corners of said bolster, and provided with downwardly-extending sides for bracing said stakes against lateral strain, substantially as described.

R. W. DAVIS.

Witnesses:

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