No Model.)

C. HANSON & O. M. PHELPS.

WAGON GEAR.

No. 262,664, Patented Aug. 15, 1882.

Fig. 1.

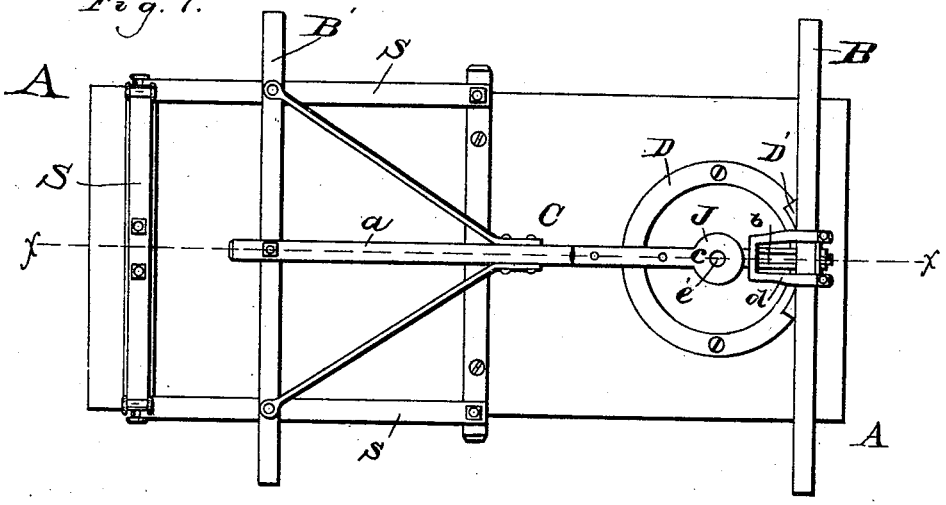


Fig. 2.

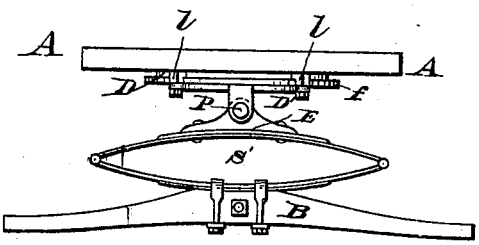


Fig. 3

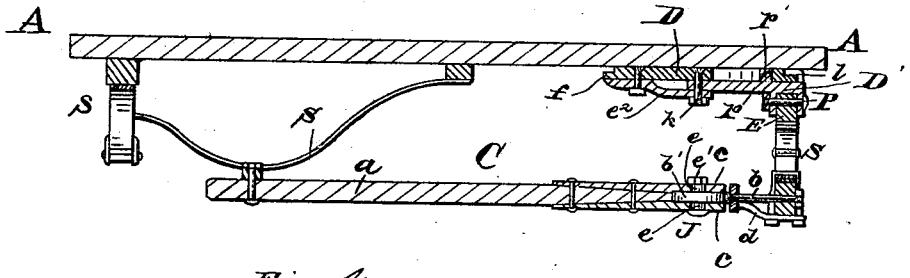
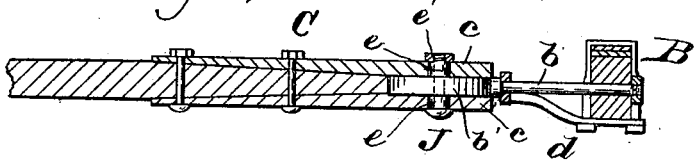


Fig. 4.



Witnesses.
Henry Frankfurter,
S. A. Staley

per.

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Christian Hanson
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Attorney

UNITED STATES PATENT OFFICE.

CHRISTIAN HANSON AND OLIVER M. PHELPS, OF MADISON, WISCONSIN.

WAGON-GEAR.

SPECIFICATION forming part of Letters Patent No. 262,664, dated August 15, 1882.

Application filed May 19, 1882. (No model.)

To all whom it may concern:

Be it known that we, CHRISTIAN HANSON and OLIVER M. PHELPS, citizens of the United States of America, residing at Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Wagon-Gears, of which the following is a specification.

Our invention relates to improvements in wagon-gears.

The object of our invention is to provide a strong, durable, and at the same time simple wagon-gear, so constructed and arranged that the wagon, particularly the springs and king-bolt, is relieved from the strain of twisting the body in passing over obstructions or rough and uneven ground.

Our invention consists in certain combinations and arrangement of parts, as hereinafter fully set forth.

In the accompanying drawings, which form a part of this specification, Figure 1 is a bottom view of our improved gear. Fig. 2 is a front view, and Fig. 3 a sectional elevation, of the same, taken on the line *x x* of Fig. 1; and Fig. 4 is a detailed view of some of the parts enlarged.

Similar letters refer to similar parts throughout the several views.

In the said drawings, A A represent the bottom of the wagon bed or box; B, the front and B′ the rear axle.

S S′ are the springs, which may be made in the usual manner.

C is our improved jointed and swiveled reach, which is composed of the parts *a* and *b*, the part *b* of which is journaled at one end in the axle B, and is provided at the other with a cylindrical head, *b′*, on each side of which is a small hub, *e*. The cylindrical head *b′* fits between circular plates *c c*, secured to or formed in one piece with the part *a*. The hubs *e e* turn in suitable bearings therein, the whole being held firmly together by a bolt, *e′*. A bifurcated brace, *d*, secured to the under side of the axle B, and having a bearing on the part *b*, near the head *b′*, serves to strengthen and steady the part *a*.

D is the circle or fifth-wheel, which is secured directly to the bottom of the bed or box A A, with its center coincident with the center of the joint in the reach C, and has on its periphery a flange, *f*. The lower part of the circle, D′, bears on the face of the circle, with the projecting part *p* pivoted at the center by the king-bolt *k*. In addition to the king-bolt *k*, the lower part, D′, is secured to the circle, D by the two L-shaped lugs *l*, which hook over the flange *f* and a projection, *p′*, on the part *p*, which bears on the inner side of the circle D.

E is what we term the "spring-block," which rests on the top of the spring S′, and connected to the lower part of the circle, D′, by a swivel-joint, P. The lower part of the spring rests on the axle B, and is secured directly thereto. A small brace, e^2, secured at the rear end to the rear of the circle D, serves to strengthen and steady the king-bolt *k*, which passes through the other end thereof.

The advantages of this gear are numerous. By having the circle secured directly on the bottom of the box or bed it is relieved of the unnecessary weight, and has a large flat bearing-surface, which permits it to be made of cheaper material than a circle under the springs. By means of the swiveled spring-block over the spring the circle, king-bolt, and spring are relieved of any undue strain from the twisting of the body on uneven ground. The front wheels are given a longer circle, and the wagon thereby enabled to make a shorter turn. The manner of connecting the upper and lower parts of the circle and the parts of the jointed reach renders accidents very unliable, even should the king-bolt become lost or broken.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A jointed reach, C, consisting of the part *b*, having the cylindrical head *b′*, with hubs *e e*, in combination with the part *a*, having circular plates *c c*, substantially as shown and described.

2. The circle D, provided with the flange *f*, in combination with the lower part, D′, having projection *p′* and L-shaped lugs *l l*, substantially as shown and described.

3. A jointed reach, C, consisting of part *a*, having circular plates *c c*, and part *b*, having

cylindrical head b', provided with hubs e e, in combination with the axle B and brace d, substantially as described and shown.

4. The combination of a circle, D, having flange f, lower part, D′, with projecting part p, provided with projection p', and having swivel P and L-shaped lugs l l, king-bolt k, and brace e^2, substantially as shown and described.

5. A circle, D, having flange f, lower part, D′, having projecting part p, with projection p', L-shaped lugs l l, king-bolt k, and swivel P, in combination with the springs S, and with a jointed and swiveled reach, C, swiveled into the front axle, B, and jointed at J, with the center of said joint coincident with the center of the circle D, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

CHRISTIAN HANSON.
OLIVER M. PHELPS.

Witnesses:
HANS SPILDE,
R. G. SIEHUKER.