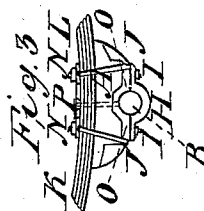
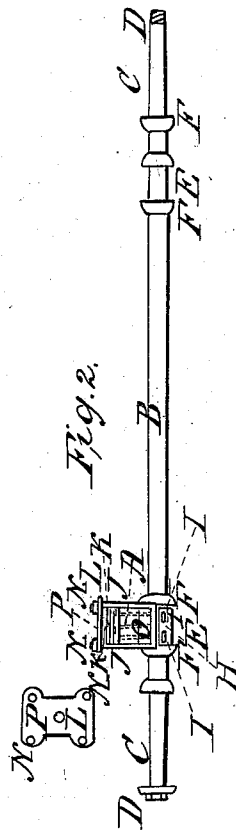
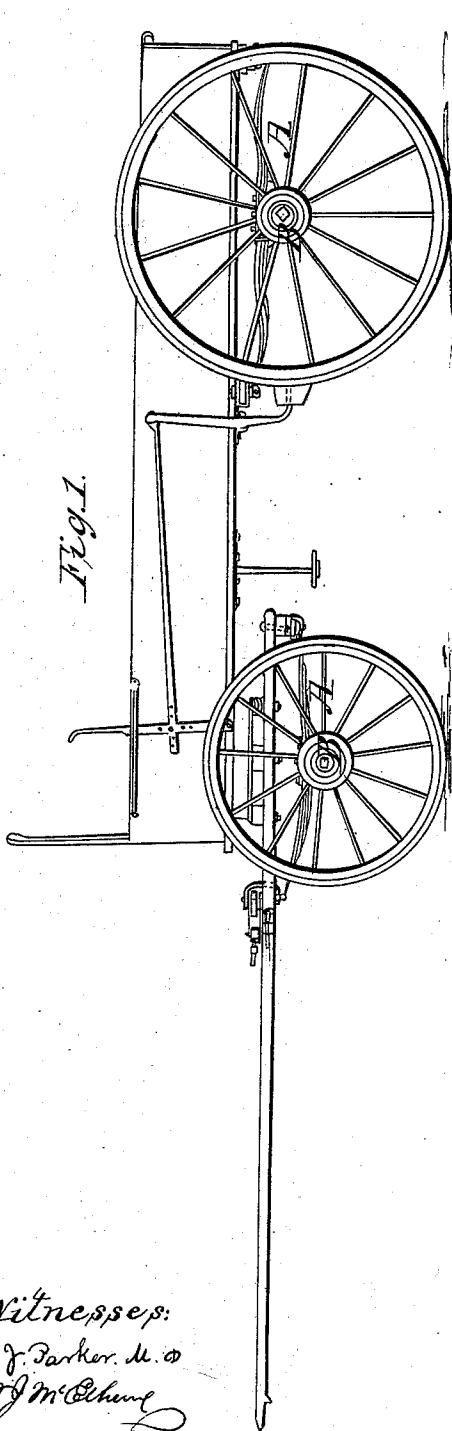


L. F. PALMER.

Running-Gear.

No. 70,013.

Patented Oct. 22. 1867.



Witnesses:
G. J. Parker. M. O.
J. McElhiney

Inventor:
L. Franklin Palmer

United States Patent Office.

L. FRANKLIN PALMER, OF ENDFIELD, NEW YORK.

Letters Patent No. 70,013, dated October 22, 1867.

IMPROVEMENT IN WAGON-AXLES AND GEARING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, LEWIS F. PALMER, of the town of Endfield, Tompkins county, New York, have invented an improved Wagon-Axle and Gearing therefor; and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, and to the letters of reference thereon.

Figure 1 is a view of my wagon in profile.

Figure 2 is a view of my revolving axle and its bearings, and

Figure 3 shows the mode of fastening the parts above the block to the block, and the lower axle-box to the block.

My objects are twofold: First, that while I retain the box and movable bearing in the hub for use in cramping, turning, and other vicissitudes in the use of a wagon, yet the main journal, for constant use, shall be on the axle near the hub. This I accomplish by enclosing the axle at a point just outside the hub, and preferably just beneath the springs, when used, or at a corresponding point in other wagons. Thus it will be seen that the axle usually revolves with hubs, and the looseness in the hubs is to allow of the slight inequalities of motion above alluded to. Second. My other object is to gear the springs to the revolving axles, already described, in such a manner as to be able to readily disconnect the axles, wholly or in part, without loosening or ungearing the other parts of the wagon. This I accomplish by strapping the superincumbent parts to a block, so that the parts above and connected therewith are held alone by these straps. To this block I fix the upper metallic box that bears on the axle, and by bolts and burrs hold the under box fast beneath and about the axle. Thus I lock the wagon to the axle, and at the same time can, by these bolts and burrs, loosen, wholly or in part, the axles from the rest of the wagon.

These and other lesser objects are seen in the drawings.

In fig. 1 is seen a wagon, made originally in this county, a bold, simple, durable, and very useful device known as a "platform-wagon." Since, it has been extensively and acceptably diffused. It has no reach, usual bolster, nor the common central axle bearings. The rear part of the box is supported on a platform, made by three flat springs and a front cross-bar. The bearings of the parts above the axle and load are on the axle, directly under the side springs and near the wheel-hubs. The forward part of the box rests on a broad fifth-wheel, the upper half of which is fast to the box and the under half to a platform. A king-bolt, which nowhere connects with the axle or any of its immediate adjuncts, holds the platform and box together. The bearings and arrangement of the front springs are similar to that of the rear axle. The hills or pole connect by simple fixtures to the front of the platform. It makes an admirable wagon.

In fig. 2, B is the axle, and C C the loose journals for the wagon-wheels, held in place by the burrs and threads D D. At E E are the journals for constant use, made between the collars F F F F, and H is the lower box of the axle, held in place by the bars I I. The straps J J encircle the spring K. The block A does not hold the lower box H, so that the axle is removable without disturbing the straps J or other parts. In fig. 3 the same letters indicate the same parts. The binding of parts together by the straps J J, and the adjustment of the lower part of the axle boxing are clearly seen. The plate L is seen to be made whole, and to receive the four ends of the straps, and to be perforated at P by an oil-passage, seen by dotted lines to pass to the inside of the axle boxing.

The other parts and uses of my invention are apparent to those skilled in the art to which it appertains.

Claim.

1. The construction of a revolving axle, for a wagon or carriage, with two journals or boxes, the outer one in the hub of the wheel, and the inner or other under the springs or bearings of the body of the wagon on the axles, and their arrangement in the manner substantially as described.

2. So constructing the lower part of the boxing, under and connected with the springs, that the plate H can be removed and the revolving axles, without disturbing the straps J J, or the springs, or other parts connected therewith, as described.

3. The placing over the springs the broad plate L, and beneath the block A the upper part of the boxing of a revolving wagon-axle, and binding the same in one fixture, independent of the lower part of the boxing H, as described.

4. The perforated plate L, spring K, block A, and box O, of a wagon with revolving axles, all provided with a tube or passage, P, for the purpose of oiling the boxing and journals, as described.

L. FRANKLIN PALMER.

Witnesses:

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