

U. S. HALL.

Improvement in Methods of Attaching Springs to Carriages.

No. 114,676.

Patented May 9, 1871.

Fig. 1.

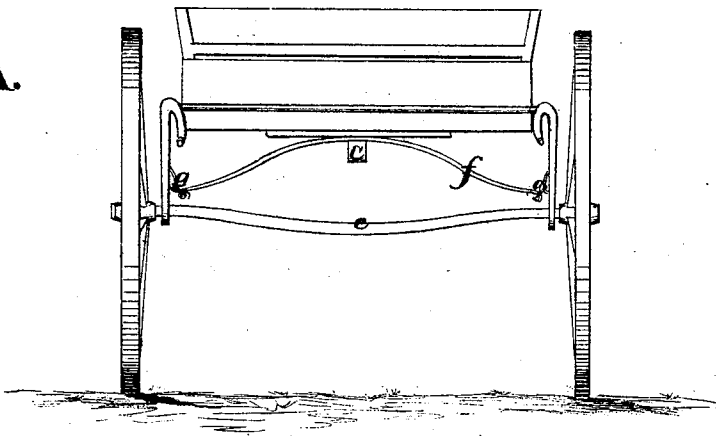


Fig. 2.

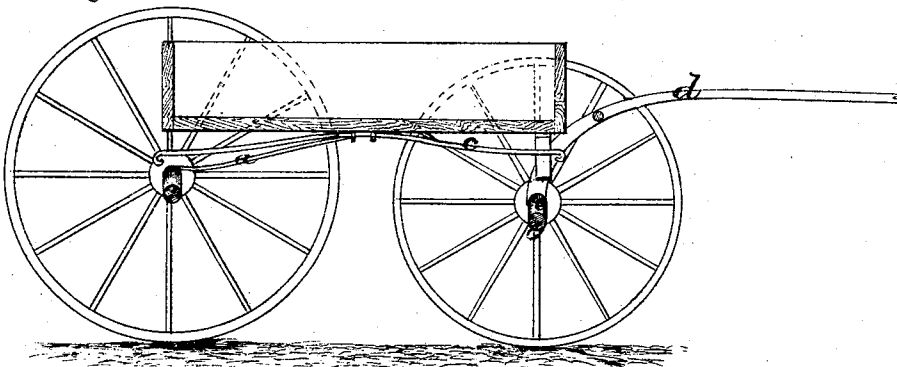
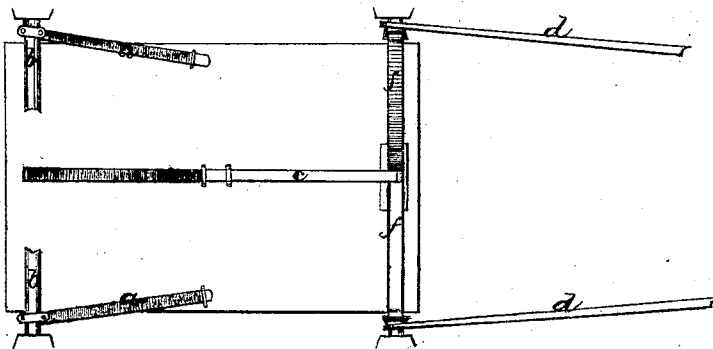


Fig. 3.



Witnesses.
Chas. Kemper
E. B. Curtis.

Inventor
U. S. Hall
Chipman & Forman, Esq.
attorneys

United States Patent Office.

URIAH S. HALL, OF CHEMUNG, NEW YORK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO JESSE OWEN, OF SAME PLACE.

Letters Patent No. 114,676, dated May 9, 1871.

IMPROVEMENT IN METHODS OF ATTACHING SPRINGS TO CARRIAGES.

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, URIAH S. HALL, of Chemung, in the county of Chemung and State of New York, have invented a new and valuable Improvement in Wagon-Springs and Method of Attaching them to Wagons; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a front view of my spring.

Figure 2 is a central vertical longitudinal section of the same.

Figure 3 is a bottom view of the same.

This invention relates to springs for wagons and other vehicles; and

It consists in a novel arrangement of the springs and the peculiar manner of attaching them to the other parts of the vehicle, all as hereinafter specified, the object being to secure strength, lightness, and economy in a certain class of spring conveyances.

Referring to the drawing, which represents a light spring-wagon, the hind springs *a* are attached to the axle *b* close to the inner end of the hub, by suitable means, as a clamp around the spring and the axle. They are also attached to the wagon-box in a proper manner, as by a plate and bolts; their position thus being oblique to the wagon-box, they serve as braces as well as springs.

Another spring, *c*, in the form shown, may be connected to the wagon-box near the center of its length, in a suitable manner, so that its ends will bear upon

the axles only when the load or weight in the box is greater than the other springs are intended to support.

The thills *d* may be connected to the front axle *e*, as shown, in a proper manner, so that they will rise up from the upper side of the axle and form bearings for the front spring *f*, which is directly over the front axle, and is in the form shown.

The spring *f* is supported on the thills, as shown, by means of the staple and link *g*, which will permit the motion of the thills without moving the springs materially; or some other like means may be employed.

The springs may be made of one or more plates, and when thus applied to vehicles they are cheap, comparatively, and serve as the coupling in connection with the wagon-box, and also as braces.

I claim as my invention—

1. The combination and arrangement of the springs *a* attached to the rear axle and the vehicle-bed, and the spring *f* attached to the thills and the vehicle-bed, all constructed and connected substantially as and for the purposes set forth.

2. In combination with the foregoing combination, the center spring *c*, all constructed and arranged substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

URIAH S. HALL.

Witnesses:

ANDREW J. NICHOLS,
J. NEWTON DEXTER.