

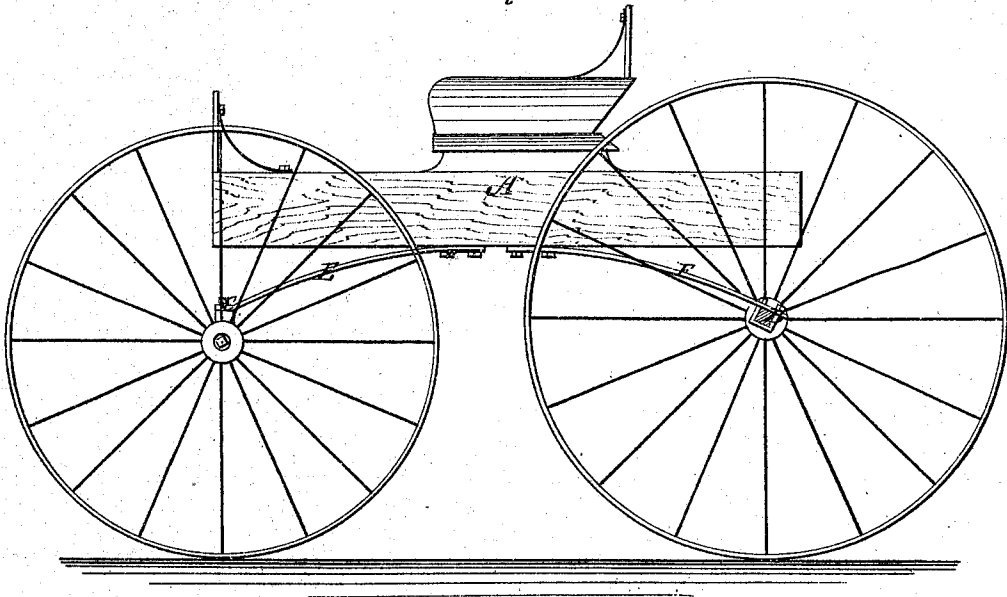
J. H. CORNWELL.

Improvement in the Mode of Attaching Springs to Wagons.

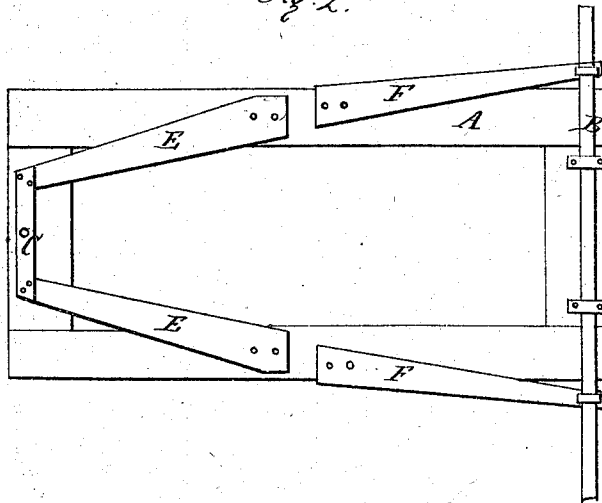
No. 129,717.

Patented July 23, 1872.

*Fig. 1.*



*Fig. 2.*



Witnesses:

*Chas. Nida*  
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Attorneys.

# UNITED STATES PATENT OFFICE.

JONATHAN H. CORNWELL, OF CORRY, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND CLARENCE G. HARMON, OF SAME PLACE.

## IMPROVEMENT IN THE MODE OF ATTACHING SPRINGS TO WAGONS.

Specification forming part of Letters Patent No. 129,717, dated July 23, 1872.

Specification describing a new and Improved Wagon-Spring, invented by JONATHAN H. CORNWELL, of Corry, in the county of Erie and State of Pennsylvania.

My invention consists of curved springs of flat metal, attached at one end to the axle and at the other to the under side of the wagon body or frame at the center, or the front ones will be attached at one end to a bolster, in such manner that as the weight of the load is increased the said springs will be proportionately stiffened by the box or frame settling down upon them from the point of their connection with it toward the other end, and so lessening the distance between the bearing-points that their elasticity will be proportionately lessened.

Figure 1 is a side elevation of a wagon with springs arranged according to my improvements; and Fig. 2 is a plan of the bottom of a wagon-box, showing the said arrangement of springs.

Similar letters of reference indicate corresponding parts.

A is the wagon-box; B, the hind axle; C, the bolster of the front axle. E represents the front springs, and F the hind springs, which are connected to the said axle or bolster at

one end by clips or otherwise, and at the other end to the box near its center. Said springs may, if preferred, consist of one semi-elliptical spring, attached to the box at the center, and at its ends to the axles.

It will be seen that as the said springs are pressed downward by the load they tend to assume a horizontal line, and the bearing-point of the box gradually extends toward the axles, so as to shorten the space between the bearings, by which the elasticity is reduced in the proportion that the said distance is shortened, so that I have a kind of compensating arrangement by this plan, which adapts the springs to the load, although the latter may vary to a considerable extent.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The flat side springs E E and F F, all attached at one end to middle of side of body, and each pair attached at the other end to the front or rear axle, as and for the purpose described.

JONATHAN H. CORNWELL.

Witnesses:

B. J. OSBORN,  
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