J. H. DURAND.
Wagon-Gear.

No. 208,381. Patented Sept. 24, 1878.

Fig. 1

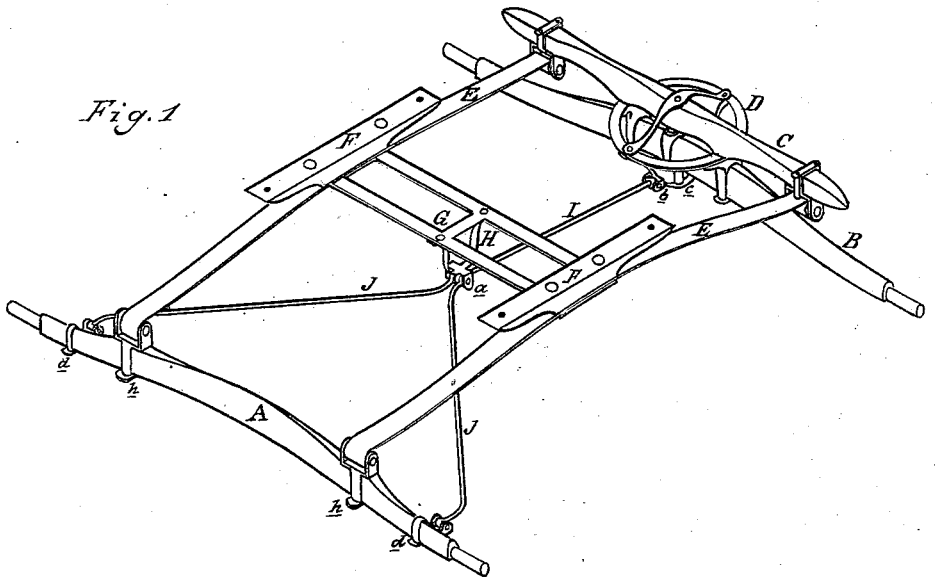
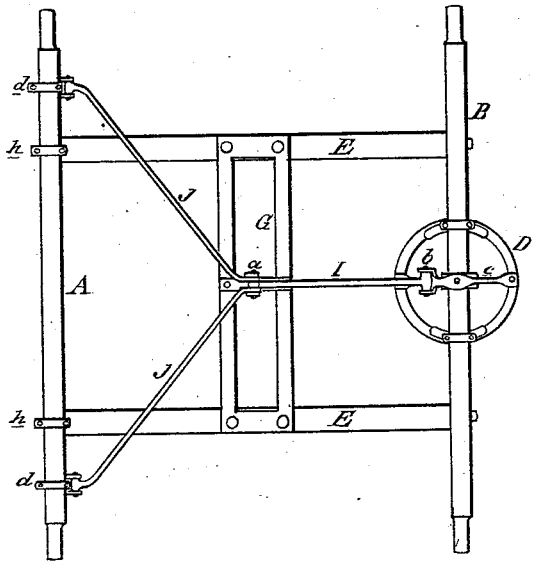


Fig. 2



Attest:
A. Barthel
Charles J. Kent

Inventor:
J. H. Durand
By Atty
Thos. S. Sprague

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN H. DURAND, OF DETROIT, MICHIGAN.

IMPROVEMENT IN WAGON-GEARS.

Specification forming part of Letters Patent No. **208,381**, dated September 24, 1878; application filed June 19, 1878.

To all whom it may concern:

Be it known that I, JOHN H. DURAND, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Side-Spring Wagon-Gears, of which the following is a specification:

In side-spring wagons experience has developed the fact that a greater depression upon one side than the other lengthens that spring more than the other, thereby throwing farther to the rear the corresponding end of the rear axle by the greater lengthening of the spring under the greater depression. It is also found that such greater depression upon one spring tends to produce a twisting or torsional action upon the other spring near its ends. The object of my invention therefore is to remedy these difficulties, which have heretofore attended the use of side-spring wagons as ordinarily constructed.

Figure 1 is a perspective of my running-gear from the top. Fig. 2 is a plan from the bottom.

In the accompanying drawing, which forms a part of this specification, A represents the rear axle; B, the front axle; C, the head-block; D, the fifth-wheel; E, the side springs, and F the bearing-blocks which support the body upon the springs, and are all of the usual construction. G is girder or platform laterally and centrally and rigidly securing the side springs E together. H is a hanger, supported from the longitudinal center of the platform G, with its lower end terminating in a bifurcated bracket, *a*. I is a rod, pivoted at its front end to a bracket, *b*, which, in turn, is secured to a metallic brace extending across the lower side of the circle and around the forward axle. J are two other rods, of equal length, with their forward ends, together with the rear end of the rod I, pivoted by means of a single bolt passing through them and the bracket *a*, while the rear ends of said rods J are pivoted to the clips *d* upon the rear axle.

In the drawings my device is shown as secured to a narrow box-wagon, the clips *d* being near the shoulders of the rear axle. For a business-wagon, or one requiring a wider box, which would necessitate the springs being placed farther apart, the clips *d* may be dispensed with and the rear ends of the rods J may be pivoted to the clips *h*, which also secure the springs to the rear axle.

In practice it is found that in the employment of running-gear constructed as above described, should a greater weight be imposed upon one spring, the rigidly-attached girder or platform G acts somewhat as an equalizer, communicating to the other spring a portion of such excess of weight, compelling both springs to act simply vertically and without torsion or twist. At the same time the rods I and J J receive, by means of the hanger H, the lower end of which rests upon the bracket *a*, the superimposed weight upon the springs at the central pivotal point, thereby preventing the greater depression upon one spring than the other, and consequent lengthening of the same, from throwing one end of the rear axle more to the rear than the opposite end.

I am aware of the Letters Patent No. 193,444, issued to S. Gibson, July 24, 1877, and disclaim any part of said invention; but

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

In combination with the central girder or platform G, the hanger H, terminating in the bifurcated bracket *a*, the rod I, pivoted at its forward end, and the rods J, pivoted at their rear ends, as described, and each of said rods centrally pivoted below the girder or platform, constructed and arranged substantially as and for the purposes set forth.

JOHN H. DURAND.

Witnesses:
H. S. SPRAGUE,
THEO. S. DAY.