F. F. DOLAND & F. SCHERB.

Vehicle Springs.

No. 165,218. Patented July 6, 1875.

Fig. 1.

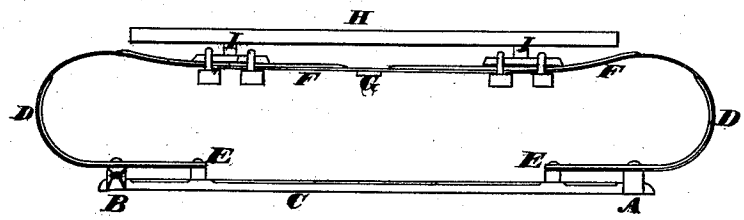
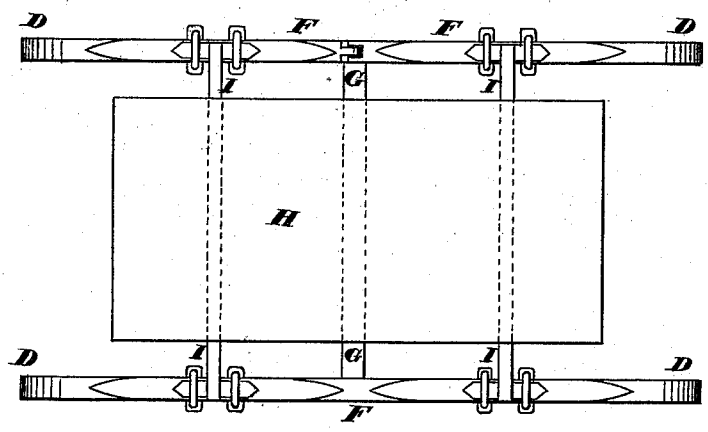


Fig. 2.



Witnesses

Geo. H. Strong.

Jno. L. Boone

Inventors

Frank F Doland

Francis Scherb

by Dewey & Co

Attys

UNITED STATES PATENT OFFICE.

FRANK F. DOLAND AND FRANCIS SCHERB, OF SACRAMENTO, CALIFORNIA.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **165,218**, dated July 6, 1875; application filed April 15, 1875.

To all whom it may concern:

Be it known that we, FRANK F. DOLAND and FRANCIS SCHERB, of Sacramento city and county, State of California, have invented an Improvement in Carriages; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention or improvement, without further invention or experiment.

Our invention relates to certain improvement in vehicle-springs, in which we are enabled, by the combination of the C and side springs in one continuous piece, to provide an easy riding and desirable vehicle.

Referring to the accompanying drawings for a more complete explanation of our invention—

Figure 1 is a side elevation. Fig. 2 is a plan view. A is the rear axle-bed, B the bolster, and C C the reaches, of a vehicle. D D are C-springs, which have their lower ends secured to the bolster and axle-bed, and to two bars extending across the reaches, as shown at E. It has been usual to connect the end of the C-springs by flexible leather straps, so that the body of the vehicle depended entirely upon the elasticity of the springs D. In our present invention, we have constructed the springs D of steel, and they are extended at the top, as at F, so as to unite at the center, and may be either made continuous, or they may have a joint at their meeting ends. In either case, these side pieces F are so arranged that their center bears upon a cross-bar, G, which extends from side to side, and has its center secured to the floor H of the vehicle body. Between this central point and the curve of the spring at each end one or more leaves may be attached, in the manner of stiffening and building up leaf-springs. Bars I extend across beneath the vehicle body, and have their ends clipped to the center of these leaves, their center passing through elastic supports beneath the body of the vehicle, as described in a former patent granted to us. The cushions may be held in boxes, or preferably in mortises in sills extending along beneath the wagon-bed. By this construction we are enabled to produce a very elastic easy-riding vehicle, and we avoid the disagreeable noise and rattle which numerous joints entail.

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

In combination with the reaches C, the C-springs D D, extended at their top so as to unite, substantially as and for the purpose set forth.

FRANK F. DOLAND.
FRANCIS SCHERB.

Witnesses:
J. A. LEAMAN,
ED. M. MARTIN.