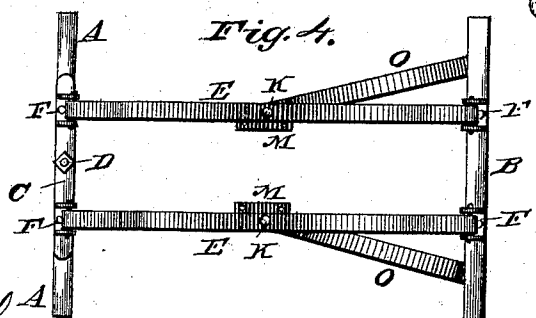
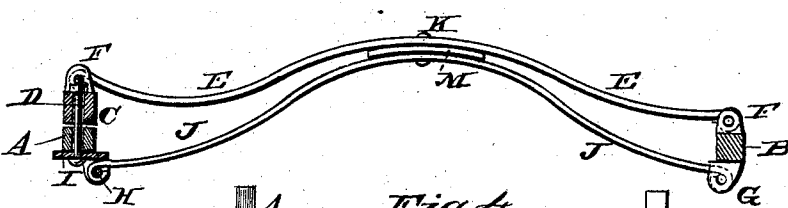
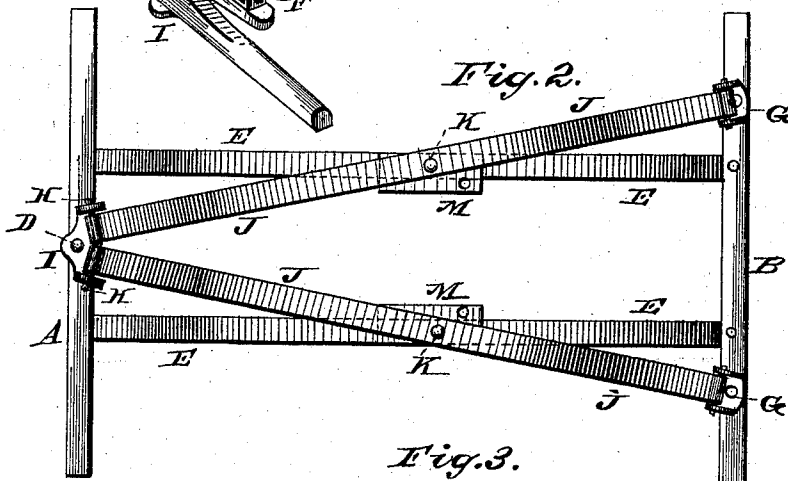
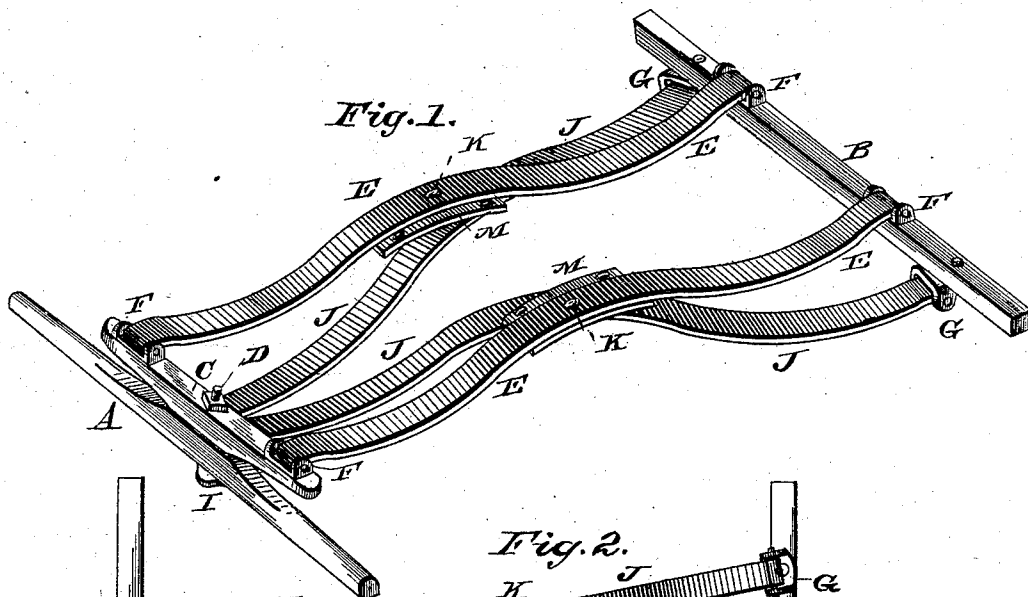


(No Model.)

J. NUTT.
VEHICLE SPRING.

No. 290,701.

Patented Dec. 25, 1883.



Witnesses:
Phil C. Dietrich.
J. R. Pittell

Inventor:
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Attorneys.

UNITED STATES PATENT OFFICE.

JAMES NUTT, OF OXFORD, OHIO.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 290,701, dated December 25, 1883.

Application filed August 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES NUTT, of Oxford, in the county of Butler and State of Ohio, have invented certain new and useful Improvements in Vehicle-Springs; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a perspective view of my improved vehicle-spring. Fig. 2 is a bottom plan view. Fig. 3 is a longitudinal sectional view, and Fig. 4 is a plan view illustrating a modification.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to vehicle-springs; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings hereto annexed, A represents the front axle, and B the hind axle, of a vehicle to which my invention has been applied. The front axle supports the bolster C, which is connected thereto by the king-bolt D, permitting said front axle to turn as upon a pivot.

E E are two parallel flat arched springs, connecting the ends of the bolster C with the rear axle by means of clips F upon the upper sides of said bolster and axle, to which the ends of the said springs are hinged, as shown,

To the under side of the rear axle, near the wheels, are secured similar clips, G. To these clips G are hinged the rear ends of a pair of diagonal arched spring-braces, J, the front ends of which are hinged upon a bent or V-shaped pin, H, connecting the sides of a clip, I, swiveled upon the king-bolt D, under the front axle. The central arched portions of

the springs E and spring-braces J are connected by bolts K, which also serve to secure in place the plates M, interposed between the springs and braces, for the purpose of supporting the body.

The spring-braces J, constructed and arranged as described, serve to prevent the axles from tilting under a heavy load, and also prevent the body from rocking or swaying.

In the modification shown in Fig. 4, I dispense with the front ends of the spring-braces J, and simply connect the under sides of the arched springs E with the ends of the under side of the hind axle by spring-braces O. This construction, which in many cases will be sufficiently effective, of course involves less expense.

I claim and desire to secure by Letters Patent of the United States—

As an improvement in vehicle-springs, the combination of the axles, the bolster mounted upon the front axle, a pair of parallel springs connecting the ends of the bolster with the rear axle, the king-bolt, a clip swiveled upon the under end of the latter and having a V-shaped transverse pin, a pair of spring-braces hinged upon said pin, and connected with the under side of the rear axle, near the ends of the latter, and body-supporting plates arranged between the parallel springs and the spring-braces at their point of intersection, the whole arranged substantially as described, whereby tilting of the axles and swaying of the body under a heavy load are prevented, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES NUTT.

Witnesses:

F. J. CONE,
DAVID CONOVER.