

(Model.)

J. R. HULL.

Brace for Vehicle Springs.

No. 242,539.

Patented June 7, 1881.

Fig. 1.

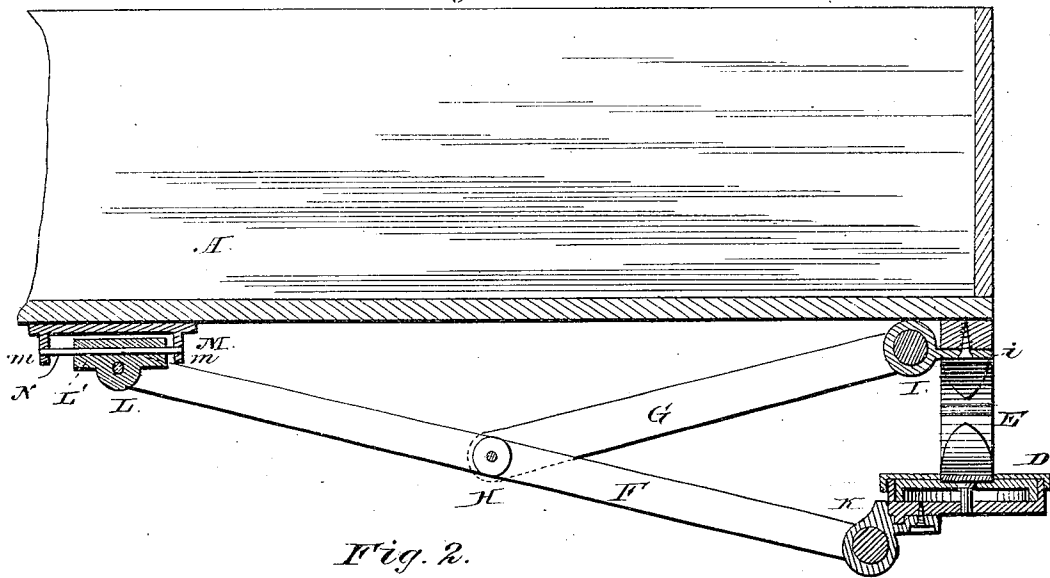


Fig. 2.

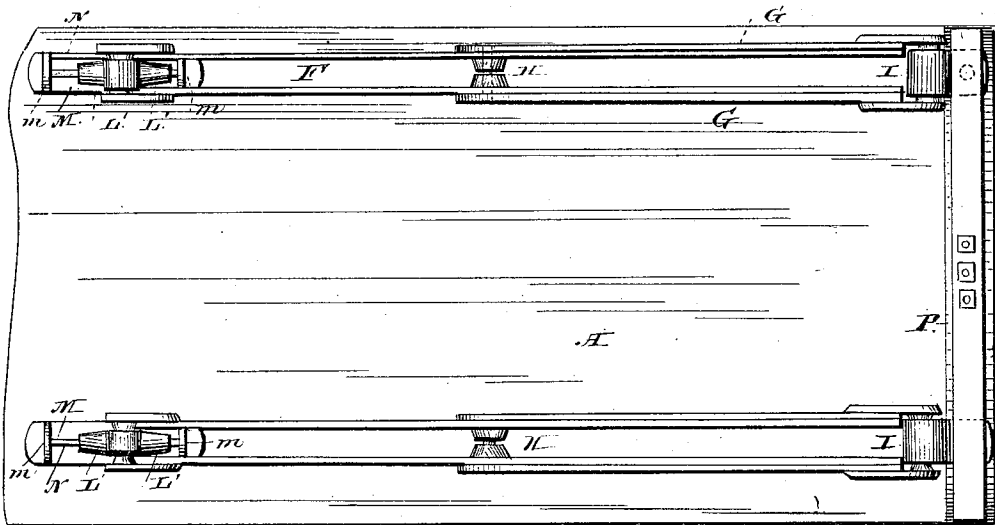
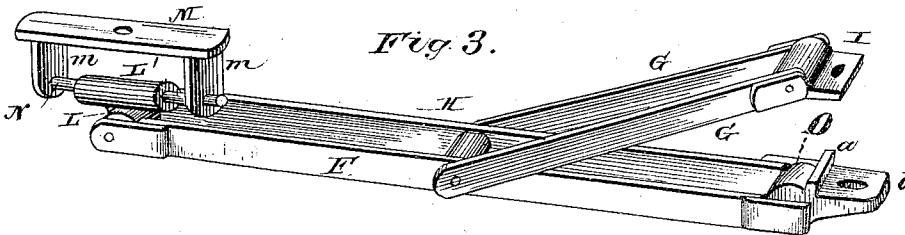


Fig. 3.



WITNESSES

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BRACE FOR VEHICLE-SPRINGS.

SPECIFICATION forming part of Letters Patent No. 242,539, dated June 7, 1881.

Application filed April 4, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN R. HULL, of Spring Hope, in the county of Bedford and State of Pennsylvania, have invented certain new and useful Improvements in Braces for 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, and in which—

Figure 1 is a longitudinal vertical section of the front part of the box and part of the running-gear of a spring-wagon, showing my improved brace as applied to the fifth-wheel. Fig. 2 is a view of the under side of the wagon-box, showing a set of braces, with their adjuncts, as applied to the springs and running-gear; and Fig. 3 is a perspective view of one of the braces for the hind axle and springs detached.

Similar letters of reference indicate corresponding parts in all the figures.

My invention contemplates certain improvements in the running-gear of spring wagons or vehicles; and it consists in the combination, with the wagon box or body and its springs, of a system of jointed stays or braces, of which one brace is used for the fifth-wheel and its spring, while two braces are employed (one on each side of the box) for the hind axle and its spring, substantially in the manner and for the purpose hereinafter more fully set forth.

In the annexed drawings, A represents the wagon box or body, which may be of any desired pattern or construction, and D is the fifth-wheel, which is suitably clipped to the front axle. (Not shown.) E is the front spring.

The jointed stay or brace is composed, essentially, of two parts—viz., a long arm, F, and a short arm, G, which are jointed at H. Hinged to the free end of the short arm is a knuckle, I, having a projecting lip, i, which is bolted to the under side of the middle top part of the front spring, E. The long arm has at one end a knuckle, K, which is bolted to the fifth-wheel below the upper knuckle, I, and at the other end of arm F is pivoted a knuckle, L, which is cast with a sleeve, L', in the same longitudinal axis as arm F.

M is a plate, which is bolted to the under side of box A, and has two downward-projecting lugs, m, between which a rod or pin, N, is fixed—that is, inserted through the sleeve L'—and which is of such a length that the sleeve, with its knuckle, can play freely forward and back between the lugs or stops m m.

The joint or knuckle L at the upper end of F is in a line with the knuckle I at the upper end of G, as shown in Fig. 1.

The two braces for the hind axle and its spring are constructed and arranged in substantially the same way, with the exception that a knuckle, O, of the shape shown in Fig. 3 is substituted for the knuckle K. The knuckle O has two projections, a b, at right angles to one another, and is clipped to the axle through holes made in said projections or lips. The upper knuckle, I, of the short arm G is bolted to its appropriate end of the spring-bar or spring-bar irons of the hind spring, P, in a vertical line with the knuckle at the lower end of arm F, the other or upper end of which is constructed with a sliding knuckle, L L', and plate M, precisely as the front brace. There are two hind braces, one at each end of spring P, as shown in Fig. 2, and their plates M are, of course, bolted to opposite sides of the wagon-box, in a line with the middle plate. If desired, the hind axle may be further braced by rods extending from the central knuckle or joint, H, of each of the side braces, F G, out to opposite ends of the axle, to which they are secured close to the hubs, in which case these rods would answer the same purpose as the hounds or braces on a perch.

Where a perch is used, as on a spring-buggy, the plate M is bolted to the under side of the box and the short arm G is bolted to the under side of the top part of the spring by its knuckle, which may be made to suit the elevation of the box. The lower end of arm F is bolted by its knuckle to the top side of the under part of the spring.

It is obvious that this brace may be constructed of malleable strap-iron, wrought-iron, cast-iron, or any other suitable material, and of any desired dimensions, the knuckles to be shaped in all cases to suit the elevation of the wagon-box.

From the foregoing description, taken in connection with the drawings, it will readily be seen that these jointed stays or braces prevent tipping or tilting of the springs E and P forward or back, so that each spring will work in a true vertical plane. It will further be seen that the play of the spring up and down is limited by the play of the sliding sleeve L L' upon pin N between its stops *m m*, thus avoiding breakage by too great an upward strain on the springs. Again, it gives pliability and elasticity to the whole running-gear, reduces the cost of "ironing" a buggy or other spring-vehicle, and can be easily applied and again removed when desired. All joints or knuckles should be so constructed as to exclude dirt and dust, so that they may work smoothly and easily at all times.

Having thus described my invention, I do not claim, broadly, the combination, with a spring-supported wagon-bed and its springs, of jointed stays or braces adapted to slide in bearings affixed to the under side of the bed; but

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

1. The combination of the wagon-bed A, having the fixed plate M, provided with the stops *m m* and their connecting-pin N, spring E, and

jointed brace F G, having at one end of its long arm F the fifth-wheel D, and at the opposite or upper end of said arm the longitudinally-perforated hinged sleeve L' and knuckle L, as shown and specified, for the purpose set forth.

2. The combination, with the wagon-bed A, provided with a front spring, E, and hind spring, P, of a jointed front brace, F G, the long arm F of which is connected at one end by its knuckle K to the fifth-wheel D, and at its opposite or upper end to the knuckle L and sleeve L', and two jointed hind braces arranged at opposite ends of the hind spring, P, the inner ends of the said three sets of jointed braces sliding by their hinged sleeves L' upon their respective bearings M N between the stops *m m*, one of said bearings or bearing-plates being in the middle line of the wagon-bed and the other two on opposite sides of the same, substantially as and for the purpose herein shown and described.

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

JOHN R. HULL.

Witnesses:

JEREMIAH GORDON,
JAMES L. NORTON.