J. MILKS & E. H. WATSON.

PLATFORM SPRINGS FOR VEHICLES.

No. 189,871. Patented April 24, 1877.

Fig. 1.

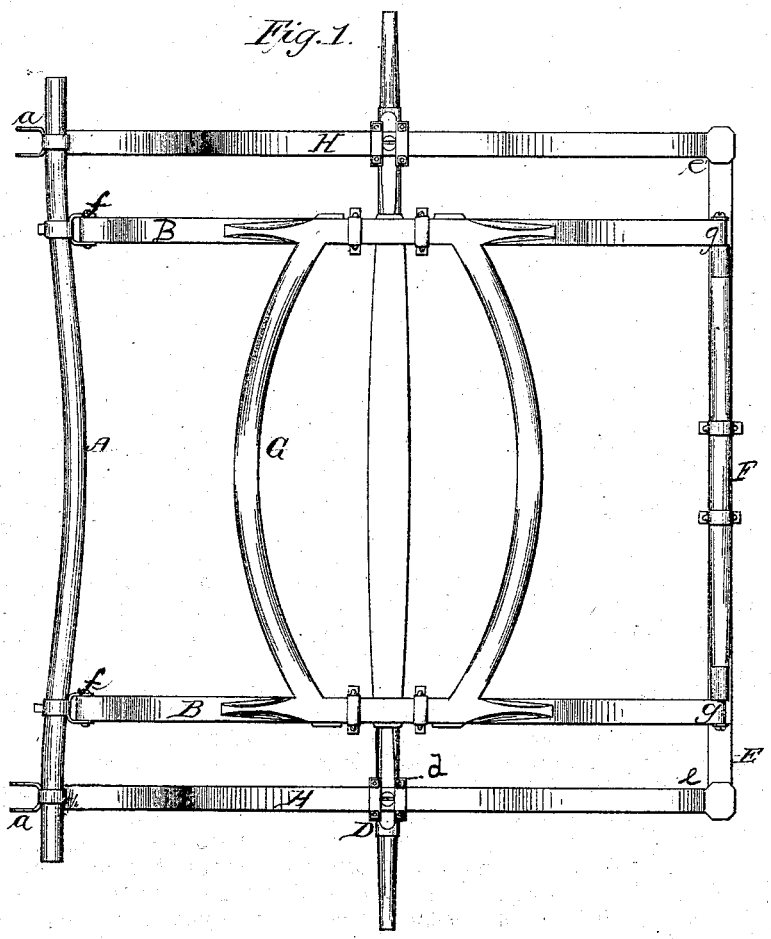
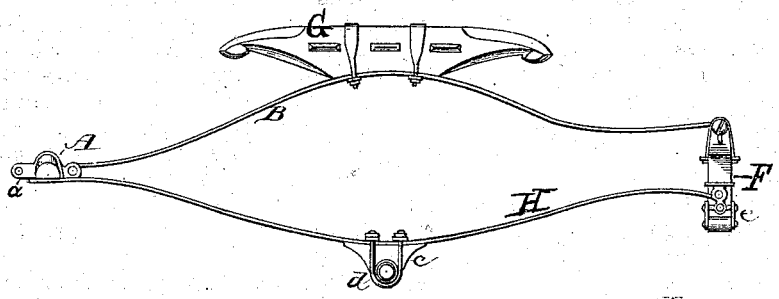


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN MILKS AND ELDRIDGE H. WATSON, OF BINGHAMTON, NEW YORK.

IMPROVEMENT IN PLATFORM-SPRINGS FOR VEHICLES.

Specification forming part of Letters Patent No. **189,871**, dated April 24, 1877; application filed September 15, 1876.

To all whom it may concern:

Be it known that we, JOHN MILKS and ELDRIDGE H. WATSON, of Binghamton, in the county of Broome and State of New York, have invented certain Improvements in Platform-Gear for Vehicles, of which the following is a specification:

Figure 1 is a top or plan view of my improvement, and Fig. 2 a side view.

Similar letters of reference indicate like parts in both figures.

D is the axle. H H are two semi-elliptic springs, secured to the axle by clips *d* and bearing-blocks *c*, in substantially the usual manner. The front end of each spring H is rigidly secured to a cross-bar, A, by means of clips or otherwise. *a a* are the ears, to which the pole or shafts may be attached, these ears being, by preference, formed each in one piece with one of the clips. The rear end of each spring H is connected to one end of another semi-elliptic spring, E, by means of pivoted link or stirrups *e e*. F is a bar attached firmly to the upper side of spring E. B B are two semi-elliptical springs, attached at their rear ends to the ends of bar F, and at their front ends to the bar A, as at *f*, Fig. 1.

G is a bolster, secured centrally upon the upper side of springs B B, to receive and support the body of the wagon or carriage.

We are aware that platform-springs have been heretofore constructed having springs B H E, bar F, and bolster G, under substantially the same arrangement as are the corresponding parts in our construction. But, as hitherto built, the springs B and H were hinged or pivoted to the cross-bar or base-bar of the pole or thills, which we have found to be objectionable in many respects, as follows:

It is many times desirable to remove the pole before moving the wagon into a barn or shed, in which case the front end of the springs B B would drop down, thus wrenching the bolster or fifth-wheel, unless a bar or other support were introduced, thus causing great inconvenience. And again, when returning the pole to its place, there were four sets of pivot-holes to be got into line, with the weight of the front end of the wagon resting, in part, upon them.

Again, it became necessary to have a pole or thills provided with four pivotal connections, at the proper distances apart to correspond with the ends of the springs, which was found to be disadvantageous, particularly in case of the breakage of a pole which was ordinarily used with such springs, because a pole or thills of the ordinary construction could not be substituted.

This latter defect was particularly objectionable where the springs were used in livery-stables, from the fact that it is frequently desirable to substitute single teams for double ones, or vice versa, for many wagons or carriages at the same time, as the condition of the roads or other circumstances indicate.

All of these difficulties are obviated by our construction, in which, by the addition of the cross-bar A, rigidly attached to the front ends of the springs H, the platform is rendered complete, irrespective of the pole or thills, and is not disturbed or in any manner affected by the addition or removal of such pole or thills, and is adapted for use with pole or thills of the ordinary description.

What we claim is—

The combination of the springs B H E, cross-bars A F, and pivotal ears *a a*, adapted to receive and support the pole or thills, substantially as set forth.

JOHN MILKS.
ELDRIDGE H. WATSON.

Witnesses:
PERRY P. ROGERS,
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