

H. R. HUIE.
Vehicle-Spring.

No. 208,977.

Patented Oct. 15, 1878.

Fig. 1.

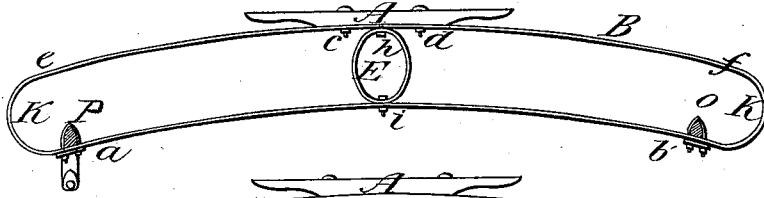


Fig. 2.

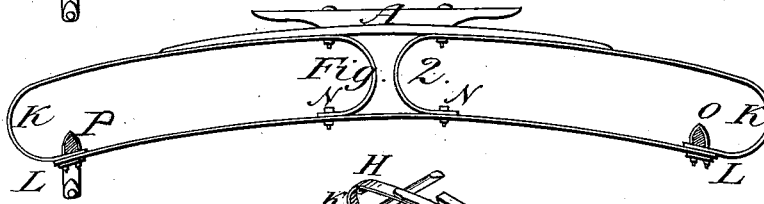


Fig. 4.

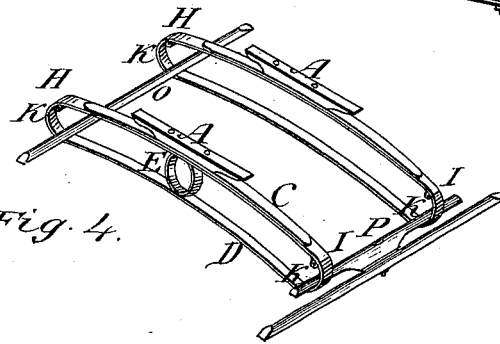


Fig. 5.

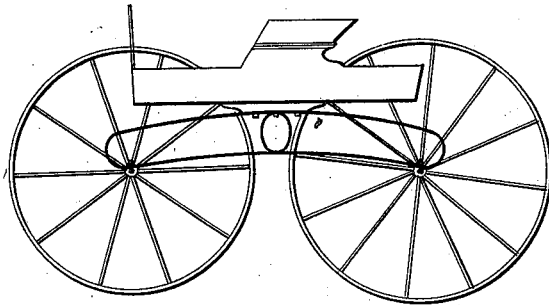


Fig. 3.

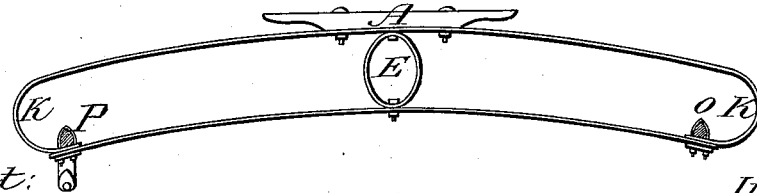
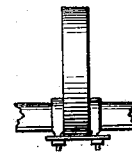


Fig. 6.



Attest:

M. H. Allen
M. J. Nightingale

Inventor.

Horace R. Huie

UNITED STATES PATENT OFFICE.

HORACE R. HUIE, OF SAN LEANDRO, CALIFORNIA.

IMPROVEMENT IN VEHICLE-SPRINGS.

Specification forming part of Letters Patent No. **208,977**, dated October 15, 1878; application filed May 27, 1878.

To all whom it may concern:

Be it known that I, HORACE R. HUIE, of San Leandro, county of Alameda, and State of California, have invented an Improvement in Vehicle-Springs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

My invention relates to certain improvements in vehicle-springs; and it consists in the formation of an endless steel spring, in which an upper and lower portion extend from front to rear axles, and the uniting ends are curves of circles, or nearly so. The weight of the vehicle is centrally supported by the upper leaf of the spring, and a brace extends from one to the other at the center, so that the weight is equally supported by the upper and lower leaves of each of these endless side springs.

Referring to the accompanying drawings for a more complete explanation of my invention, Figures 1, 2, and 3 are side elevations of my spring, showing modifications in its construction. Fig. 4 is a view of the running-gear of a vehicle. Fig. 5 is a side elevation, showing its application to a buggy.

A is the spring-bar, upon which the vehicle-body rests. C is the upper, and D the lower, spring-plates, and they are united by the curved plates *k*, so as to form a complete spring, in which both leaves and the curved ends act together. This will be equally well accomplished, as will be seen, by making the entire spring in one piece, or by making it in two parts, which may be united, as shown in Fig. 2, at L, the curved ends forming a part of the upper leaf; or it may be formed with the joint at I, as in Fig. 3.

In order to unite the leaves C D so that they will act in unison with each other and with the curved ends *k*, I employ a brace, E, which is made in any suitable shape, and is secured to the two leaves near the center and beneath the spring-bar A. By this means I produce a compound spring in which all parts act together, and I am enabled to make each part light, and at the same time effective.

I am aware that endless springs have been made similar in general appearance to my spring; but, being made of wood, the weight of the vehicle-body was supported by supplemental springs near the ends of the upper part, and the two leaves were not centrally united. The end curves were the source of elasticity in the bearing of the load.

I am also aware that double parallel side springs have been employed, with a brace uniting them centrally, but these springs were separate from each other, and were supported by shackles at the ends, thus making considerable work and less elasticity than when united at the ends, as in my invention.

What, therefore, I claim as new, and desire to secure by Letters Patent, is—

The endless steel spring consisting of the upper and lower leaves, C D, and the curved elastic uniting ends K, forming a part of the spring, in combination with the centrally-placed spring-bar A and the brace E, uniting the leaves at that point, substantially as herein described.

In witness whereof I have hereunto set my hand.

HORACE R. HUIE.

Witnesses:

GEO. H. STRONG,
FRANK A. BROOKS.