

Geo. W. Mc. Minn.

ass'd to

Self and R. T. Reiley

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Car Spring.

PATENTED
NOV 26 1867

Fig. 1.

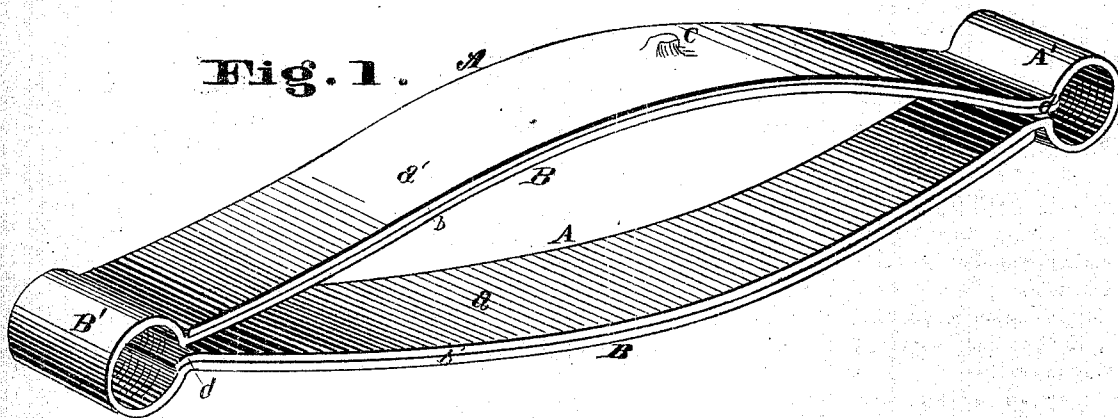
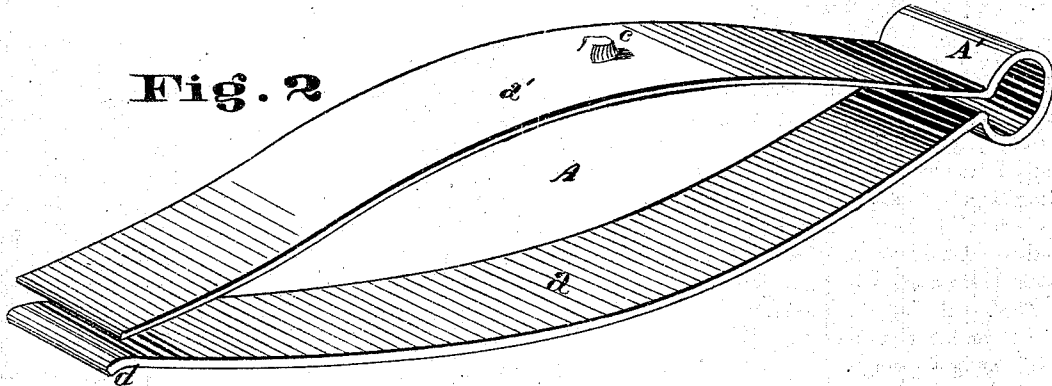


Fig. 2



Attest,

Hank Millward
R. H. Pihler

Inventor.

Geo. W. Mc. Minn
(By R. M. Pihler
Atty

United States Patent Office.

GEORGE W. McMINN, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND
ROBERT T. REILEY, OF SAME PLACE.

Letters Patent No. 71,317, dated November 26, 1867.

IMPROVED CAR-SPRING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE W. McMINN, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Car-Springs; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention consists in such construction of steel springs for cars and other vehicles, that less metal is required to produce a spring of a given power than by any other form of construction in use. In the accompanying drawings—

Figure 1 is a perspective view of a car-spring embodying my improvements.

Figure 2 is a detached view of one of the double or folded leaves.

The spring is composed, as shown, of two double or folded leaves or members, A B, the metal in each, as shown in fig. 2, being folded at or near its mid-length, to form the eye A' or B', the leaves *a b a' b'* serving each for a layer of the spring, making four layers in all. Teats, *c*, prevent displacement in the customary stirrups or bolsters. The folded leaves are shipped into place to form the complete spring, as shown in fig. 1; none of the customary bands or strips being required to unite the leaves together. The inner edges of each plate are curved into the form of lips, *d d'*, which, locking within the eye of the other member, become effectual to hold the parts securely together, without the aid of straps or bands, which, in the customary forms, add greatly to the weight of the spring. The end eyes or loops A' B' are found to be of the most signal utility, adding largely to the resilient force of the spring, with very slight increase of the weight thereof. The said loops are also effective, in conjunction with the end lips *d d'*, to lock the two members of the spring firmly together. I have found by actual experiments, that while a set of four truck-springs, constructed in the best form hitherto used, will weigh from nine hundred to one thousand pounds, a set formed on my plan, as herein described, will weigh but one hundred and eighty pounds, the springs being equal in power and efficiency.

I claim herein as new, and of my invention—

Forming a spring of two plates of metal, each of which is folded to make two layers of the spring, and shaped at or near its mid-length and inner end respectively to form the end eyes or loops A' B', and lips *d d'* of the spring, as described and for the purposes explained.

In testimony of which invention I hereunto set my hand.

GEORGE W. McMINN.

Witnesses:

GEO. H. KNIGHT,

JAMES H. LAYMAN.