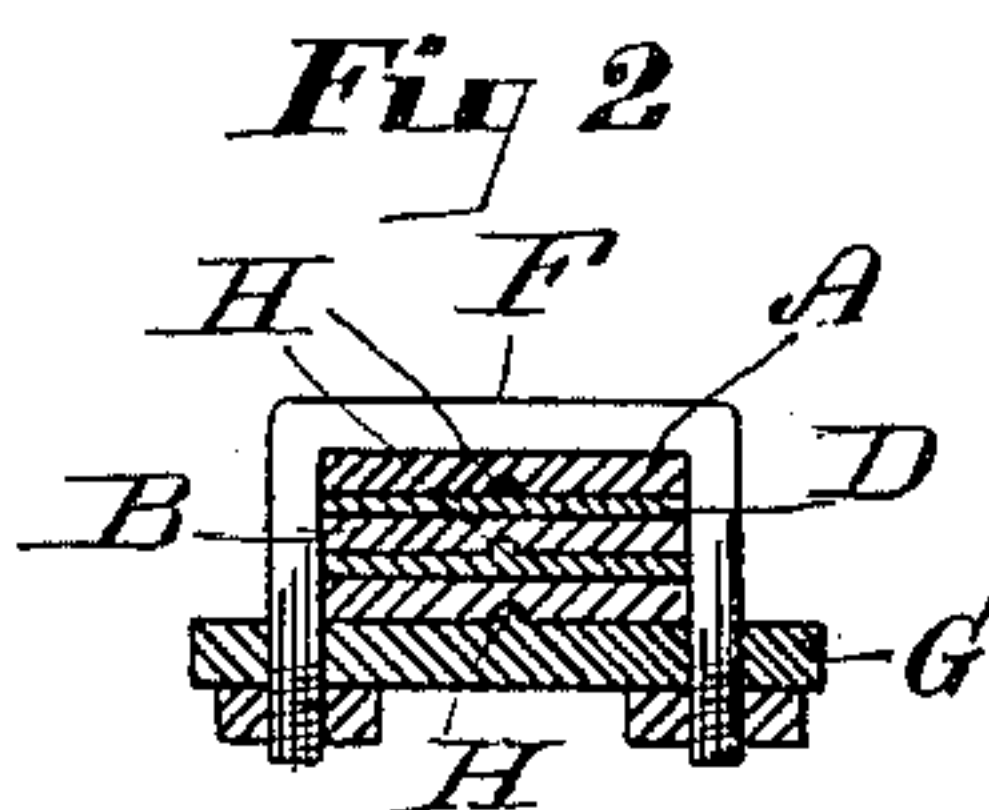
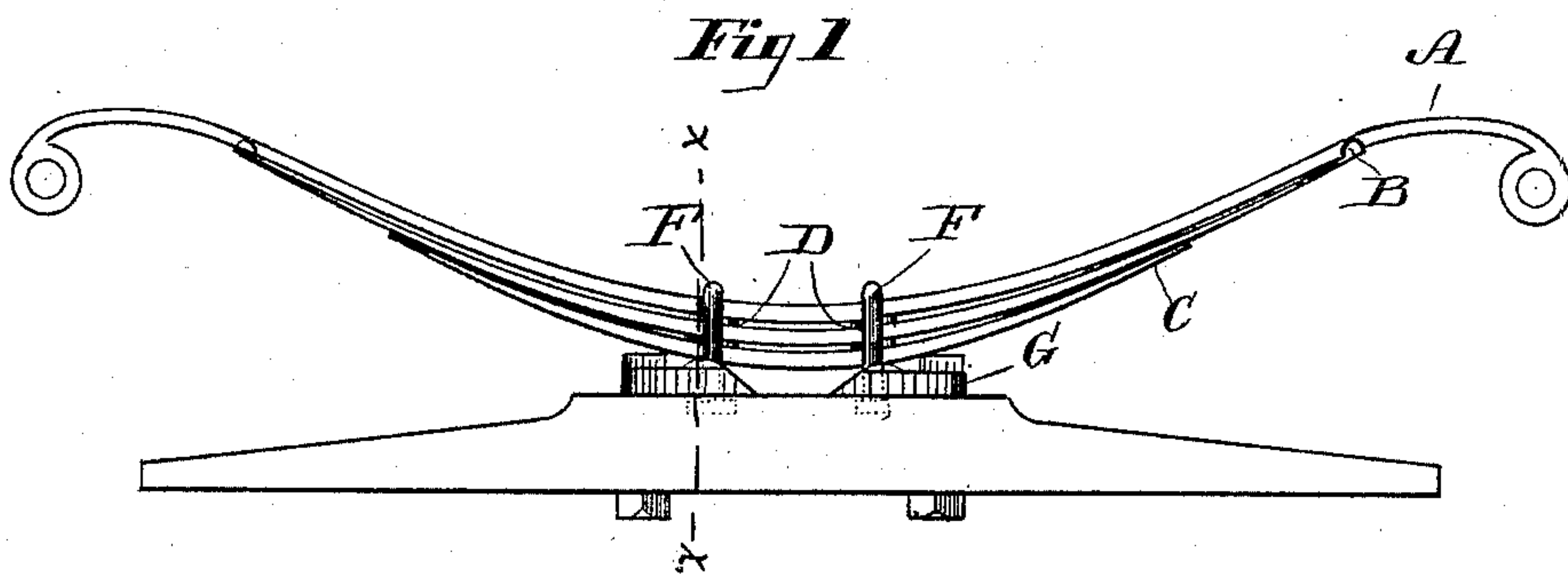


(No Model.)

G. B. HAMLIN.  
VEHICLE SPRING.

No. 319,243.

Patented June 2, 1885.



WITNESSES  
*A. Williamson*  
*W. J. Haviland*

INVENTOR  
*George B. Hamlin*  
By *Smith and Hubbard*  
Attys

# UNITED STATES PATENT OFFICE.

GEORGE BRANCH HAMLIN, OF WILLIMANTIC, CONNECTICUT.

## VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 319,243, dated June 2, 1885.

Application filed September 1, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE BRANCH HAMLIN, a citizen of the United States, residing at Willimantic, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Vehicle-Springs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel and useful improvements in vehicle-springs, but is especially intended as an improvement on the construction illustrated and described in Letters Patent No. 219,087, granted to me September 2, 1879, and has for its object to separate the individual leaves composing the spring at the center, and to allow them to have a free play at their extremities along the next succeeding leaf, whereby the said leaves may get the full benefit of their spring nature when weight is to be sustained and not bind at the center; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully and in detail explained, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction and operation, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a front elevation of a spring constructed in accordance with my improvement; Fig. 2, a section taken at the line *xx* of Fig. 1, and Fig. 3 a detail view of the yokes.

Similar letters denote like parts in the several figures of the drawings.

A is the principal leaf or main-spring, and B C are auxiliary leaves arranged in succession over the said leaf. The leaves are all separated from each other at or near their center by yokes D, interposed between them. These yokes are constructed, as shown at Fig. 3, with openings E at the extremities, through which clips F are passed and securely bolted to plates G.

H are teats formed on the inner surface of the plates and on the upper surfaces of the yokes, and which fit into corresponding de-

pressions in the leaves of the spring for the purpose of keeping the yokes from slipping or in any manner becoming displaced in respect to their relative position to the leaves. This is a very important feature, as it does away with the ordinary bolt, which passes through openings in the leaves, thereby materially weakening the spring and rendering it liable to break at this point. The leaves are made of any ordinary length, with their outer portions resting against the next succeeding leaf, so as to have a free play thereon when any weight is placed upon the spring.

The great advantage gained by my improvement is that the full benefit of the spring is obtained not only at the center, but also throughout the entire length of the several leaves, and there is no binding or buckling, as was the case in my former invention above referred to, where the ends of the leaves were connected by swinging shackles.

I do not wish to confine myself to any particular number of leaves or to the two vertical rows of yokes shown, as any number of leaves may be used with equal facility and any advantageous arrangement of the yokes may be adopted.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A spring for vehicles, composed of two or more leaves arranged one above the other, and with their central portions separated from each other by yokes, as described, placed between the leaves, on each side of the center thereof, whereby an independent resiliency is had at said central portions, and the extremities permitted to slide or play freely along the surface of the next succeeding leaf, substantially as set forth.

2. The plates and yokes constructed with teats on their upper faces, in combination with the leaves of the spring having corresponding depressions, and means for securing said parts together, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE BRANCH HAMLIN.

Witnesses:

JNO. L. HUNTER,  
C. D. MILLER.