(No Model.)

A. ARMSTRONG.

VEHICLE SPRING.

No. 326,472. Patented Sept. 15, 1885.

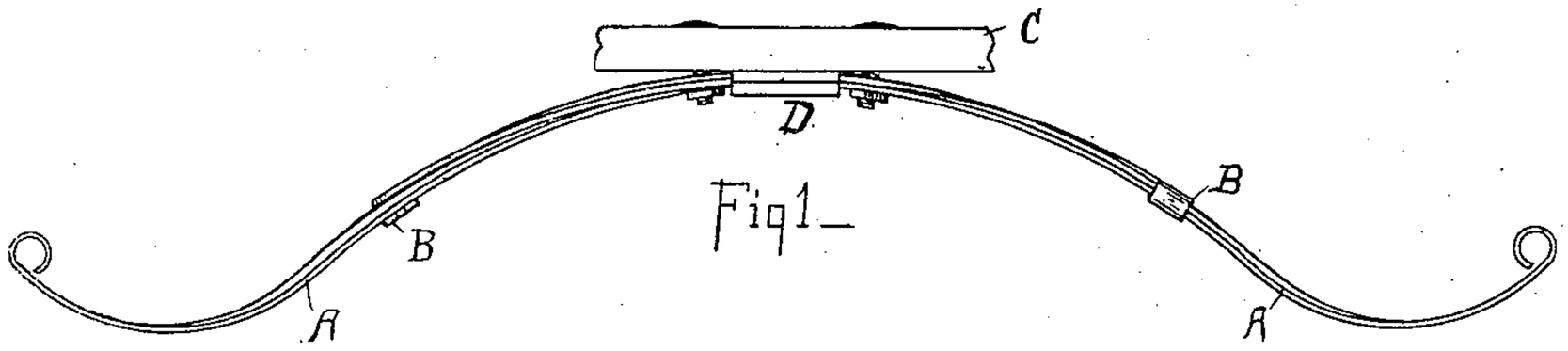

Fig 1.

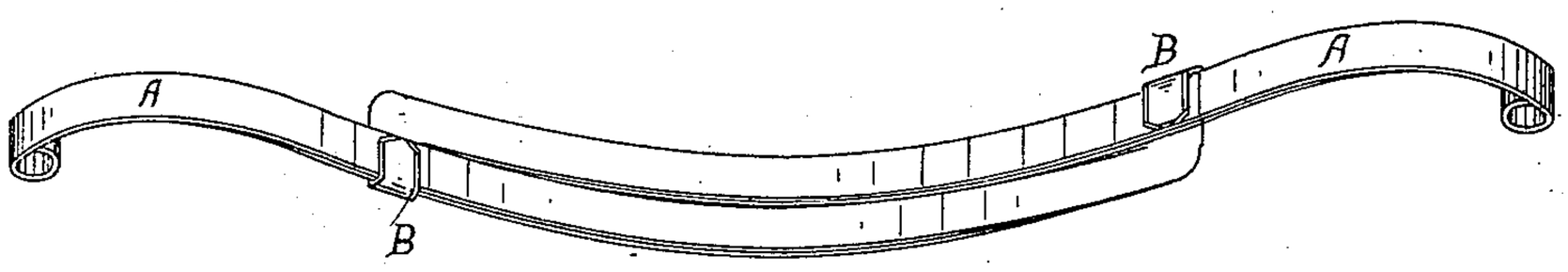

Fig 2.

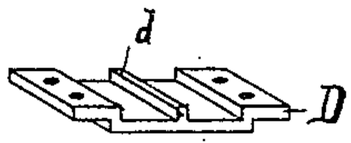

Fig 3.

Attest —
C. H. Miles.
D. S. Oliver

Inventor —
Albert Armstrong
By Lyon & Murray Attys

UNITED STATES PATENT OFFICE.

ALBERT ARMSTRONG, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO HERMAN WENDE, OF SAME PLACE.

VEHICLE-SPRING.

SPECIFICATION forming part of Letters Patent No. 326,472, dated September 15, 1885.

Application filed July 28, 1885. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ARMSTRONG, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Vehicle-Springs, of which the following is a specification.

My invention relates to vehicle-springs, and especially to that class which are used upon buggies, spring-wagons, and similar light vehicles. Its object is a light durable spring that will support the body of the vehicle in a horizontal position when unevenly loaded; also to prevent the leaves from separating or rattling, and also to prevent outward strain on the side bars when the springs are loaded down. These objects are accomplished by the means illustrated in the accompanying drawings, in which—

Figure 1 is an edge elevation of my spring and a portion of the sill or cross-bar of the vehicle-body. Fig. 2 is a perspective view of my preferred form of spring. Fig. 3 is a perspective view of the clip which I employ to secure my preferred form of spring to the bottom of the vehicle-body or to a cross-bar, which is the sill upon which the body is supported.

My spring is composed of two similar members, A, arranged side by side. These members may be composed of any suitable number of leaves, depending upon the weight to be sustained. I have shown in the drawings a two-leaf spring. The main member of each spring is curved in the usual form, and has its end turned into an eye to receive a shackle, by which it is secured to the side bar of the running-gear. The opposite end extends past the center, and is turned at a right angle to the edge of the spring. This end is bent around into the loop B and looped over the opposite spring, as clearly shown in Fig. 2. When the springs are placed together side by side, as in this figure, they are secured to the sill or cross-bar C of the body by a clip, D, Fig. 3. This clip has a central web, *d*, which projects down between the springs and rests upon the sill C, or any member of the body. It will be seen that the springs are capable of longitudinal adjustment, so as to accommodate them to different widths of vehicles.

The clip D is a convenient means of attaching the springs to a vehicle-body; but it is not essential, as it might be dispensed with and the springs A A secured to the body by bolts passing through them at the center, or upon each side of the center of the vehicle-body. It is preferable, however, in making springs for sale to the trade to attach them directly to the sill C, which may be of sufficient length to suit the largest-sized body. It is an easy matter then for the carriage-maker to shape the ends of the sill to suit the body desired and attach it to the bottom of the vehicle.

The sill C may be made of either iron or wood, and have vertical perforations for the reception of bolts to attach it to the body, so that the springs when furnished to the carriage-maker require no fitting whatever.

The inner ends of the springs, which extend past the center and are lapped over the opposite springs, serve as an additional support to each other.

The ends of the springs beyond the loops B may be made very light and elastic, so that in the vertical movement of the body these ends may curve freely and prevent outward pressure on the side bars, or that portion of the running-gear to which the outer ends of the springs are clipped.

It would be an inferior modification of my invention to extend the inner end of the springs beyond the center, as shown, and clip both members together by a yoke or other independent coupling device, instead of turning the angular end of each spring into a loop, as shown in the drawings; but the construction here shown is more simple and effective, and the spring is less liable to rattle in use.

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

1. A vehicle-spring consisting of the two similar members A A, arranged side by side, as shown, the inner end of each member overlapping the opposite member, and the two members being coupled by a loop.

2. The combination, substantially as described, in a vehicle-spring, of the two members A A, arranged together side by side, the inner end of the main leaf of each member

being turned into a loop, B, to overlap and couple both members together, substantially as described.

3. In a vehicle-spring, the combination, substantially as specified, of the two similar members A A, each having a loop, B, to couple the two members together upon opposite sides of the center, the sill C, and the clip D to couple the spring centrally to the sill C, substantially as shown and described.

ALBERT ARMSTRONG.

Witnesses:
GEO. J. MURRAY,
C. W. MILES.