

No. 779,682.

PATENTED JAN. 10, 1905.

J. E. ARMSTRONG.
VEHICLE.

APPLICATION FILED MAR. 2, 1904.

Fig. 1.

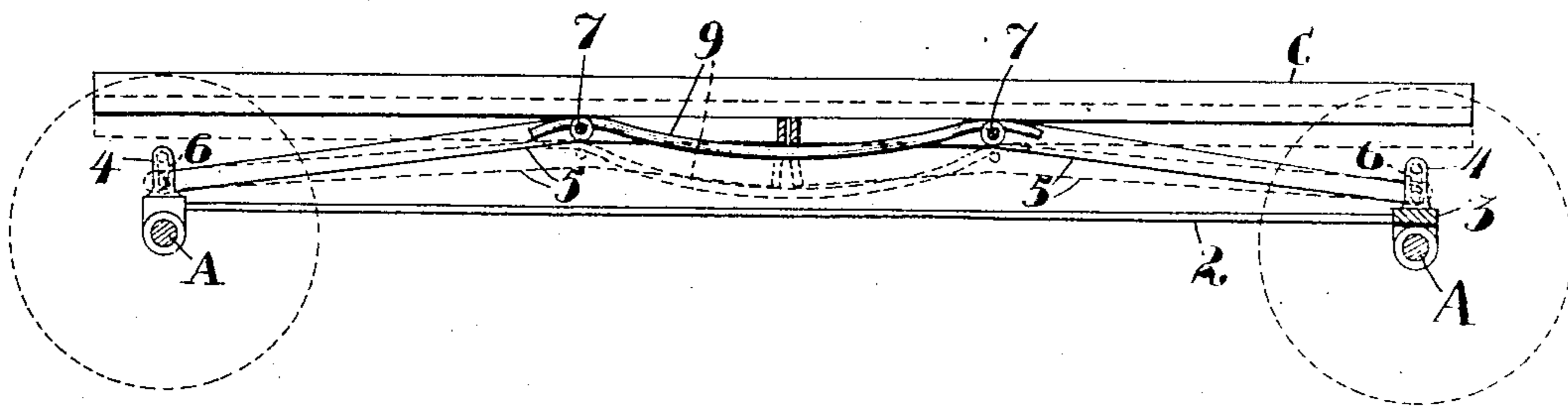


Fig. 2.

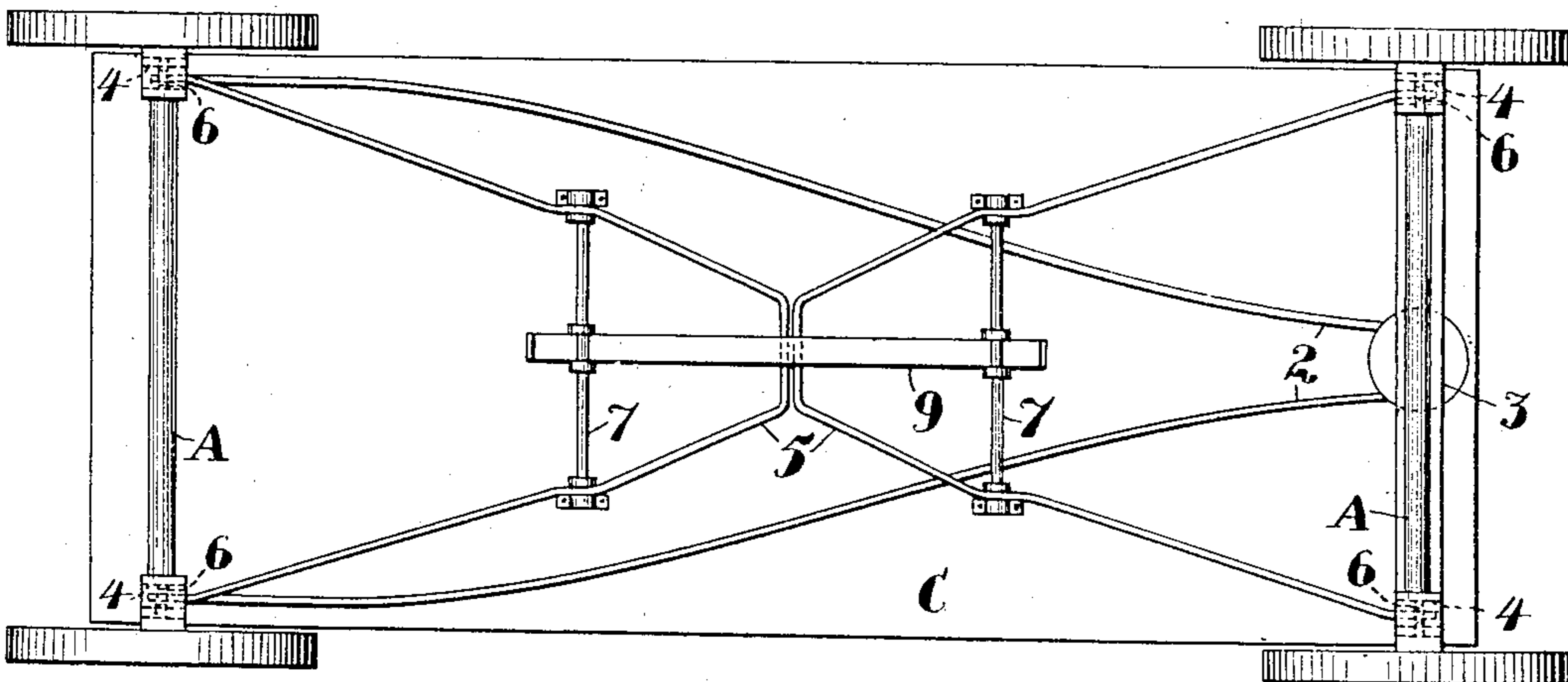
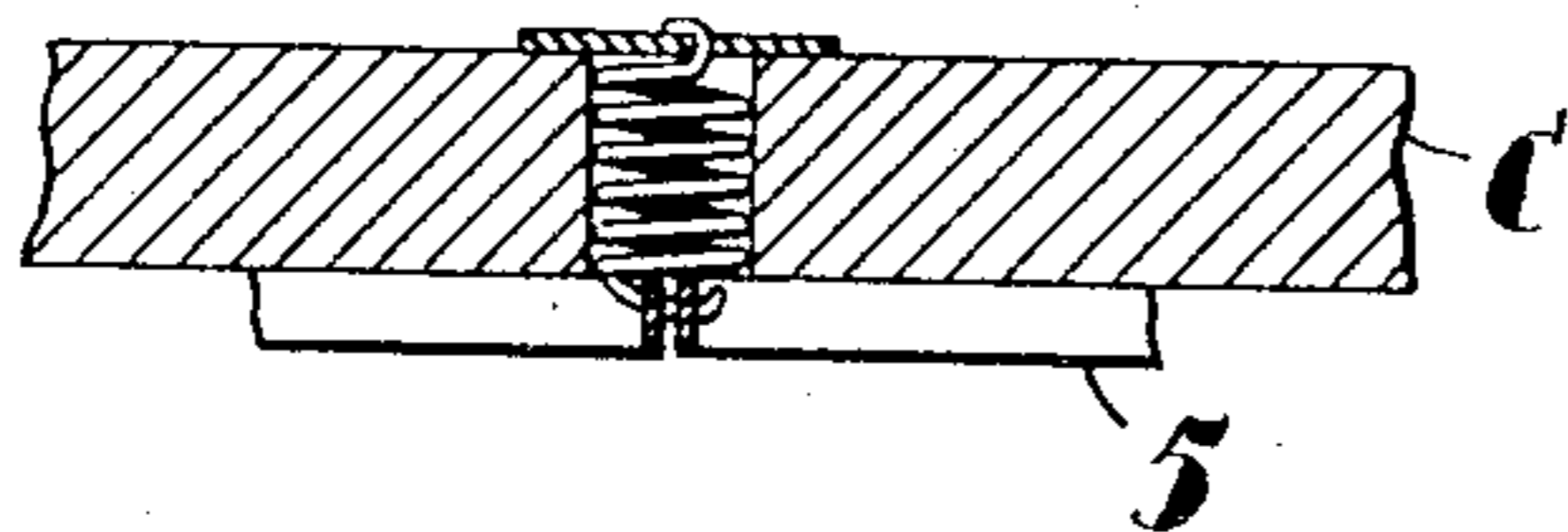


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN E. ARMSTRONG, OF SANTA CRUZ, CALIFORNIA.

VEHICLE.

SPECIFICATION forming part of Letters Patent No. 779,682, dated January 10, 1905.

Application filed March 2, 1904. Serial No. 196,223.

To all whom it may concern:

Be it known that I, JOHN E. ARMSTRONG, a citizen of the United States, residing at Santa Cruz, in the county of Santa Cruz and State of California, have invented new and useful Improvements in Vehicles, of which the following is a specification.

My invention relates to improvements in vehicles and in means of connecting the body of the vehicle with the running-gear.

It consists in the novel arrangement of fulcrumed levers, connecting hangers, and springs and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side view of my device, partially in section. Fig. 2 is a bottom view of same. Fig. 3 is a modification.

As shown in the drawings, A A are rear and front axles of a vehicle having bearing-wheels disposed thereon in any usual or suitable manner, and C represents a body of any required description. The wheel-axles are here shown as connected by a reach or reaches, as at 2, and the front axle is provided with the usual bolster 3 and any suitable or well-known means by which the wheels can be turned in unison to guide the vehicle to one side or the other. As shown in the present drawings, the front bolster and the rear axle are provided with standards or hangers 4, which serve for the connection of the levers 5 by means of swinging links 6. It will be manifest that these parts may be arranged in any suitable or well-known manner without materially altering the character of this portion of the device. The levers may be connected either above or below the axle or bolster, as the requirements of the vehicle may make necessary.

The levers 5 have their outer ends sufficiently separated and connected by links with suitable supports or hangers, as previously stated. The inner ends of these levers approach each other near the center of the vehicle, and at a point intermediate between the outer and inner ends of the levers are fulcrum rods or shafts 7, which are here shown as being fixed to the bottom of the vehicle-body or an equivalent part.

9 is a spring made of any suitable number

of leaves to provide the necessary tension. The ends of this spring are here shown as being supported by or in close proximity with the pivot or fulcrum points of the levers, and the central portion of the spring passes beneath the contiguous ends of the levers, so that both of these ends bear upon the spring.

The single flat leaf-spring here shown is representative of a plurality of similar springs lying parallel with each other which may be employed upon a heavy vehicle or where it is deemed better to divide the elastic force of the springs instead of concentrating into one. It will also be understood that spiral springs may be supported with relation to the contiguous ends of the levers so as to be compressed or extended, the object being in any construction to provide elastic springs having sufficient tension to normally raise the inner ends of the levers 5 and to support the weight of the vehicle-body.

As herein shown, the levers 5 are formed in a single piece bent at the center, so as to form parallel transverse portions of sufficient length to form a bearing upon any spring or springs which may be used. At the ends these transverse sections are bent so that the main arms of the levers 5 diverge outwardly to their points of attachment to the spring-hangers at the outer ends. I have here shown these levers as curved into a segmental form in the direction of their length, so that the outer ends will be sufficiently depressed to connect with the spring-hangers and to allow of the rocking motion of the levers about their fulcrum-shafts. The levers are of sufficient depth vertically to provide the necessary rigidity, and it will be seen that by the peculiar method of fulcruming and connecting these levers a single spring or its equivalent acting upon the center serves to resist the depressing weight of a load placed upon any part of the vehicle-body. The lever connections and the springs provide for the simultaneous movement of all parts under the stress of the load and the irregularities of surface over which it is being carried.

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

1. The combination with the axles and body

of a vehicle, of bent lever-arms fulcrumed intermediate of their length to the vehicle-body, hangers and links between the same and the adjacent ends of the lever-arms, by which the
5 outer ends of the arms are flexibly secured with the wheel-axles or bolsters, and a spring extending longitudinally of the central portion of the body between the fulcrum-points of the arms and having its central portion engaged by the bent portions thereof.
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2. The combination with the wheel-axles and body of a vehicle, of two yoke-shaped levers fulcrumed intermediate of their ends to the vehicle-body, with their inner ends contiguous and substantially central beneath the
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body, a spring having its ends supported by the fulcrum-points of the levers and its central portion underlying and supporting the inner ends of both levers, said levers having the outer ends diverging and bent downwardly
20 and swinging links by which said outer ends are connected with the axles or bolsters.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN E. ARMSTRONG.

Witnesses:

S. H. NOURSE,
HENRY P. TRICOU.