

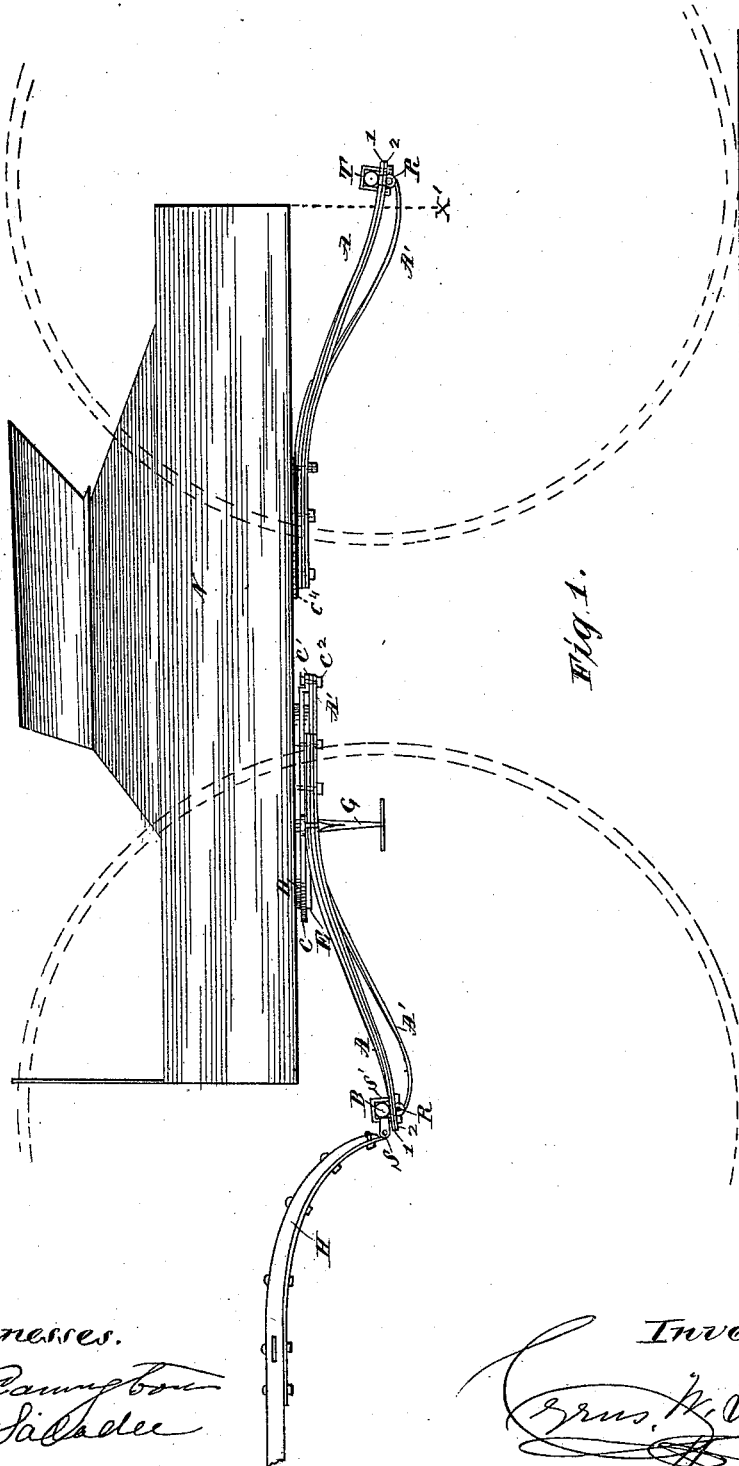
(No Model.)

2 Sheets—Sheet 1.

C. W. SALADEE.
RUNNING GEAR FOR VEHICLES.

No. 418,753.

Patented Jan. 7, 1890.



Witnesses.
J. M. Cunningham
C. W. Saladee

Inventor
C. W. Saladee

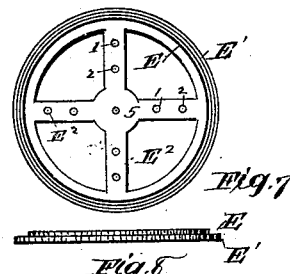
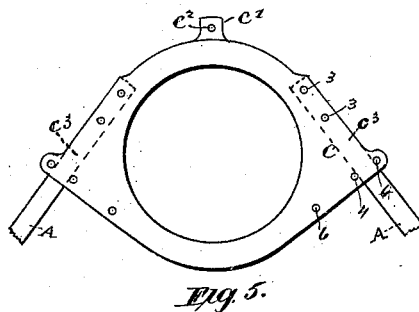
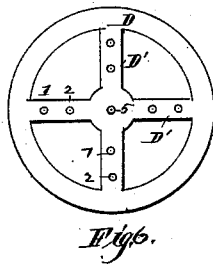
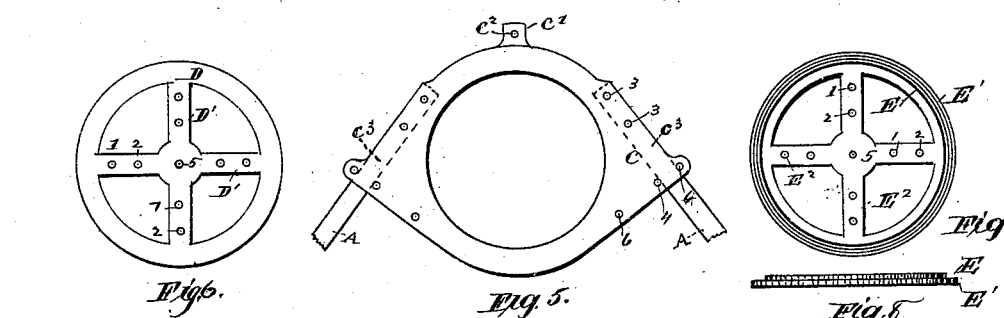
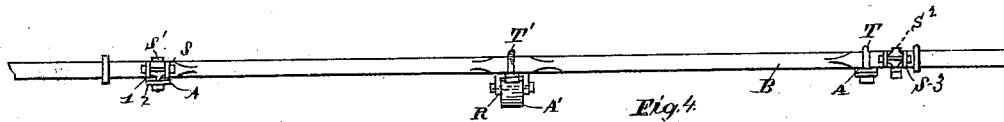
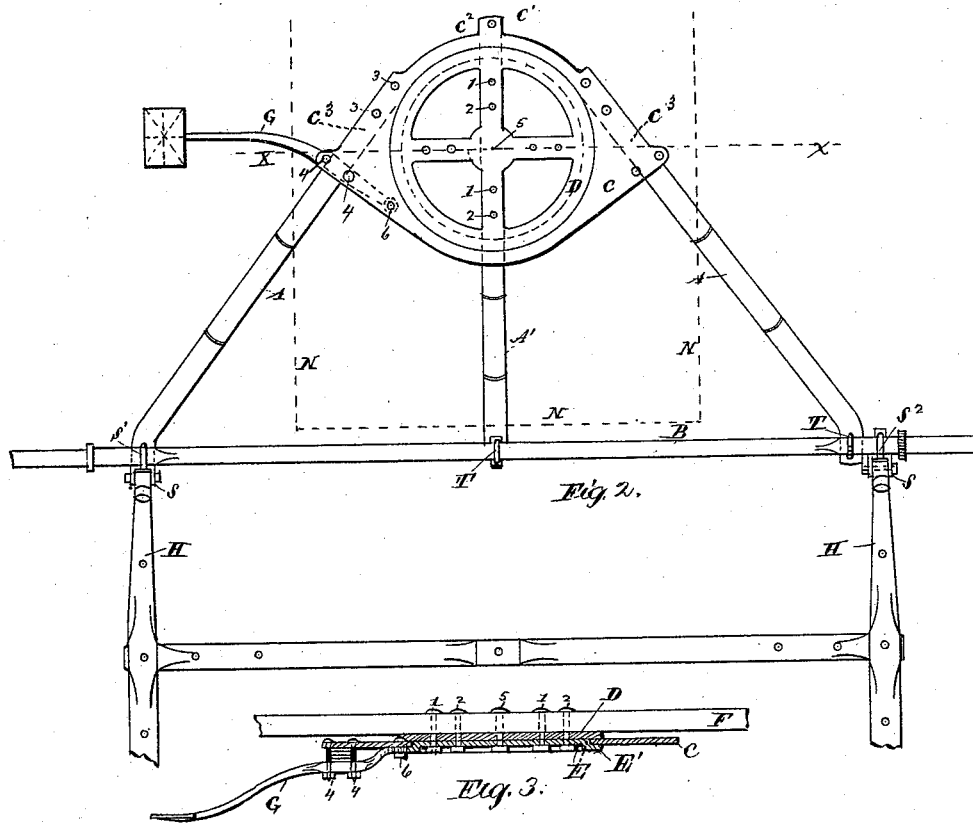
(No Model.)

2 Sheets—Sheet 2.

C. W. SALADEE.
RUNNING GEAR FOR VEHICLES.

No. 418,753.

Patented Jan. 7, 1890.



Witnesses
J. C. Saladee
A. C. Saladee

Inventor
C. W. Saladee

UNITED STATES PATENT OFFICE.

CYRUS W. SALADEE, OF CLEVELAND, OHIO.

RUNNING-GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 418,753, dated January 7, 1890.

Application filed September 2, 1889. Serial No. 322,715. (No model.)

To all whom it may concern:

Be it known that I, CYRUS W. SALADEE, a citizen of the United States, residing in the city of Cleveland, State of Ohio, have invented certain new and useful Improvements in Running-Gear for Vehicles, whereof the following is a specification embodying my invention.

The said invention has for its objects, first, the construction of vehicles for general road purposes without the employment of the usual rigid reach connecting the axles; second, to facilitate the short turning of the vehicle; third, improved methods for connecting the terminal ends of the springs supporting the body to the axle, and, fourth, the improved device for a fifth-wheel peculiar to this special class of vehicles, all as and for the purpose hereinafter more fully set forth, and as pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a complete vehicle embodying my invention. Fig. 2 is a detached plan view of the front-spring-platform seen in Fig. 1. Fig. 3 is a detached front view of the fifth-wheel in cross-section at dotted line X of Fig. 2. Fig. 4 is a front elevation of the front axle, and Figs. 5, 6, 7, and 8 are detached views of the three several plates constituting the fifth-wheel seen in Figs. 2 and 3.

Similar letters and figures refer to similar parts throughout the several views.

Two independent spring-platforms support the body at opposite ends, and each is suspended from its axle by the terminal ends of the springs connected thereto. Said spring-platforms being independent of each other, either may be used to support one end of the body, while some other well-known means may be employed to support the opposite end.

In the drawings, N represents the body of the vehicle, the bottom frame of which is adapted to make the requisite attachment therewith of the inner ends of the respective spring-platforms. Rigidly secured to the bottom frame of the body is the fifth-wheel, consisting, preferably, of three several circular plates C, D, and E, and these plates are preferably connected together in such manner that the usual "king-bolt" may be dispensed with. The middle or main plate C is

formed as represented in the detached view of same in Fig. 5. The under plate E has a projecting flange or collar E' extended from its lower edge, as seen in Figs. 3, 7, and 8. The middle plate C is placed upon the lower plate E and made to rest upon the projected collar E' and bring the top face of E flush with the top face of the plate C. The top plate D, Fig. 6, is made of a uniform thickness throughout its entire body and is provided with the same arrangement of cross-bars D' as seen in Fig. 7. This plate D is placed over both the plates C and E, and the whole is firmly bolted to the bottom frame of the body by bolts 1 2 5 1 2, passing through the arms of both the upper and lower plates, as clearly seen in Fig. 3. This leaves the middle plate C to be moved around between the upper and lower plates in turning the vehicle, while at the same time it is securely clasped between the plates D and E, and by the upwardly-projected portion E', Figs. 3 and 7, of the lower plate it is centrally retained upon said lower plate without the use of the usual king-bolt. The center bolt 5 must not be mistaken for such king-bolt, as it is used in this instance as one of the nine bolts 1 2 5 (see Figs. 6 and 7) which secure the cross-bars of the plates D and E in their relation to each other and to the bottom of the body.

It will be understood that other means may be substituted for the plates D and E whereby to maintain the main plate C in its requisite position without changing or in any manner affecting the principle of my device, it being my object to maintain the main plate C in its relation to the bottom of the body and the inner ends of the side springs A A by any appropriate means that will secure its position and operation, as stated. The main plate C is laterally extended on opposite sides, as at C³ C³, Figs. 2 and 5, whereby to adapt it to its proper connection with the inner ends of the side springs A A.

The side springs A are made preferably to the form seen in Fig. 1 and provided with two or more main plates 1 2, which latter are extended from the fifth-wheel and rigidly clipped to the axle, as seen in Figs. 1, 2, and 4, by clip T or shaft-shackle clip S'. Said side springs A have their inner ends

rigidly secured to the main plate C of the fifth-wheel by bolts 3 3, and are radially extended therefrom to the axle and immovably connected therewith, as already shown. By this rigid attachment of the side springs to the axle the latter will have imparted to it a rotary motion by the vibration of the springs; hence it is requisite that the shafts or pole H is pivotally connected to the axle, as seen in Figs. 1, 2, and 4.

S represents the usual shaft-shackle, which may be secured to the axle, as seen by S² S³, Figs. 2 and 4, or, preferably, the clip S' of the shaft-shackle S may pass directly through the end of the spring-plates 1 2 A, rigidly securing the latter to the axle, and thereby dispense with the use of the clip T'. (Seen at the right-hand side of Figs. 2 and 4.)

The steps G are of the usual form and have their inner ends connected to the under side of the springs A and the plate C by the bolts 4 4 6, as seen in Figs. 2 and 3, whereby the step becomes a "clip-bar" in connection with the bolts 4 4 to secure the spring A to the bottom of the plate C without piercing said spring with a hole at this important junction.

The spring-platform shown and described may be used with or without the longitudinally-arranged central spring A'. (Seen in Figs. 1 and 2.) In all cases where increased carrying capacity and security against accident is a consideration said central spring may be employed, having its inner end secured to the rearwardly-extended lug C' of the fifth-wheel plate C and taking the center bolt 5. (Seen in Fig. 2.) Its outer end may be rigidly connected to the axle the same as are the side springs A; but I prefer its pivotal connection with the center portion of the axle, as seen at R, Figs. 1 and 2, so as to avoid any antagonism that may occur between the action of the side and center springs, and also to admit of giving the latter a self-compensating shape, whereby to prevent the end of the body at dotted line X', Fig. 1, from striking said center spring at this point, as would happen sometimes when overloaded if said spring was in the same place as the side springs, while the radial position of the latter prevents the end of the body from striking them, since it rests between the side springs at this point, as seen by dotted lines N, Fig. 2.

The rear platform in its relation to the axle and body may be the same as described in the front platform. The inner ends of the springs being rigidly and directly secured to the bottom frame of the body, or to a plate C', (see Fig. 1,) which latter is bolted to the bottom of the body.

Without limiting my claims to the precise arrangement of the several parts shown and described, I claim—

1. The combination, in a road-wagon, of side springs radially extended from a fifth-wheel device secured to the bottom of the body, their terminal ends being rigidly secured to

the front axle at widely-separated points, and having the shafts or pole detachably connected to said axle by shackle-bearings provided with removable transverse bolts, substantially as shown, and for the purpose set forth.

2. The combination, in a road-wagon, of side springs radially extended from a fifth-wheel or king-bolt coupling secured to the bottom of the body, their terminal ends being rigidly attached to the axle at widely-separated points, a longitudinally-arranged central spring also extended from said fifth-wheel coupling to the middle portion of said axle, and shafts or pole pivotally connected to the latter, substantially as set forth.

3. The combination, in a road-wagon, of side springs radially extended from the center portion of the bottom of the body to the axle at widely-separated points, and a longitudinally-arranged central spring also extended from the bottom of said body, the outer ends of said side springs being rigidly secured to said axle and said central spring being pivotally connected to the latter at its middle portion, substantially as and for the purpose set forth.

4. The combination, in a road-wagon, of side springs radially extended from a fifth-wheel or king-bolt coupling secured to the bottom of the body, a longitudinally-arranged central spring also extended from said fifth-wheel coupling, the outer ends of said side springs being rigidly secured to the front axle at widely-separated points, said central spring being pivotally connected to the middle portion of the axle, and a pivotal shackle-coupling uniting the shafts or pole to said axle, substantially as set forth.

5. The combination, in a road-wagon, of a fifth-wheel secured to the bottom of the body, consisting of three plates or bearings, the middle one of which is movably supported between the upper and lower plates or bearings, which latter are rigidly fixed in relation to each other and the bottom of the body, and said middle plate being adapted to maintain the inner ends of side springs radially extended therefrom and connected to the front axle, substantially as set forth.

6. The combination, in a road-wagon, of a fifth-wheel secured to the bottom of the body, consisting, preferably, of three circular plates or bearings, the middle plate whereof is adapted to rigidly support the inner ends of springs extended therefrom to the front axle, said middle plate being movably retained between the upper and lower bearing-plates, and which latter are rigidly fixed in relation to each other and the bottom of the body, substantially as set forth.

7. The combination, in a fifth-wheel secured to the bottom of the body, of the main plate C, having its opposite sides C² C³ laterally extended beyond the outer periphery of the top plate or bearing D, and said extended sides being adapted to rigidly support the in-

ner ends of side springs extended therefrom to the front axle, substantially as set forth.

8. In combination with the fifth-wheel described, the main plate C, provided with a rearwardly-extended lug C', said lug being adapted to connect with the inner end of the central spring A' by a bolt or clip C², substantially as set forth.

9. The combination, with a fifth-wheel secured to the bottom of the body, of a longitudinally-arranged central spring A', having its front end connected to the axle and its inner end to the rear portion of the fifth-wheel plate C and to the vertical center bolt 5, substantially as set forth.

10. The combination, in a road-wagon, of side springs A, secured to and radially extended from the bottom of the body and rigidly secured to the axle and a longitudinally-arranged central spring A', also extended from the bottom of said body to the axle, said center spring having a greater degree of downward curvature at or near its outer end than the side springs and being pivotally connected to the axle, substantially as and for the purpose set forth.

CYRUS W. SALADEE.

Witnesses:

J. M. CARINGTON,
A. C. SALADEE.