(No Model.)

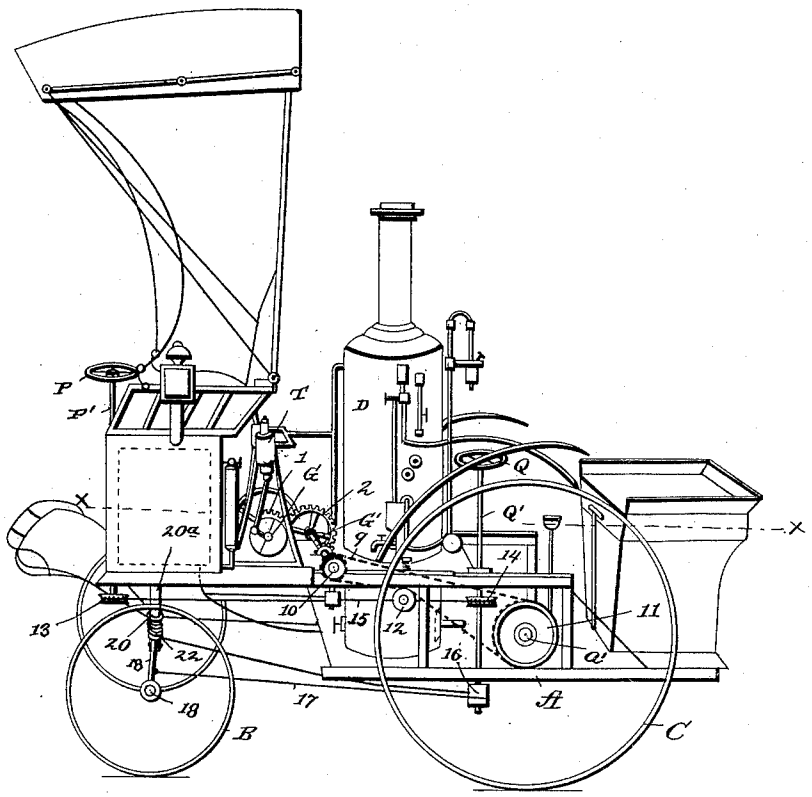
3 Sheets—Sheet 1.

A. PHILION.

STEAM CARRIAGE.

No. 482,649. Patented Sept. 13, 1892.

Fig. 1.



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(No Model.)

3 Sheets—Sheet 2.

A. PHILION.

STEAM CARRIAGE.

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Fig. 2.

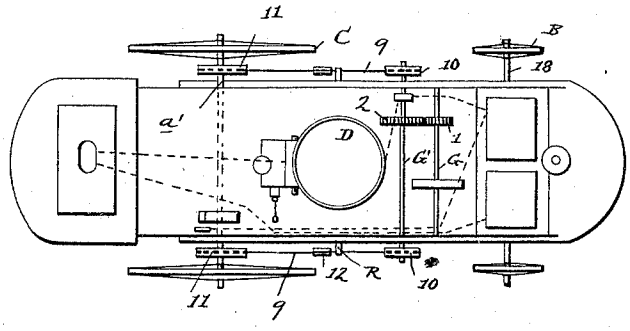
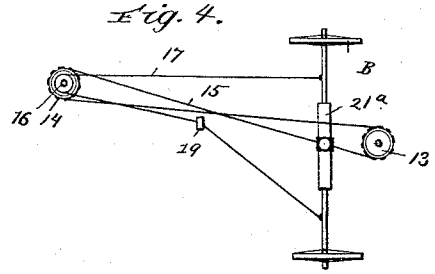


Fig. 4.



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(No Model.) 3 Sheets—Sheet 3.

A. PHILION.

STEAM CARRIAGE.

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Fig. 3.

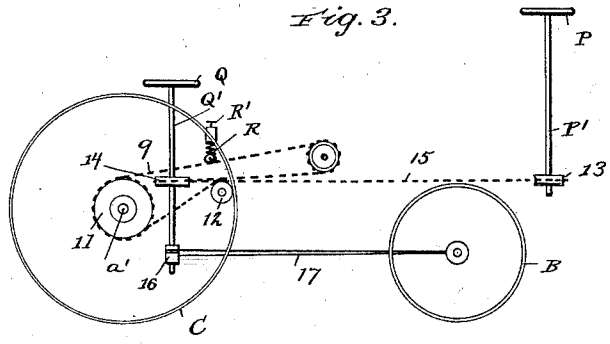
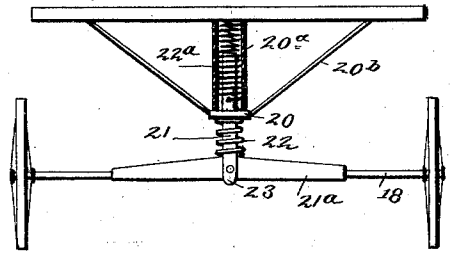


Fig. 5.



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UNITED STATES PATENT OFFICE.

ACHILLE PHILION, OF NEW YORK, N. Y.

STEAM-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 482,649, dated September 13, 1892.

Application filed February 5, 1892. Serial No. 420,443. (No model.)

To all whom it may concern:

Be it known that I, ACHILLE PHILION, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Steam-Carriages; and I do 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 has relation to improvements in steam carriages or vehicles; and it consists in the peculiar construction, certain novel combinations, and the adaptation of parts hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a perspective view of my improved carriage. Fig. 2 is a horizontal section of the same, taken in the plane indicated by the line $x\ x$ of Fig. 1. Fig. 3 is a detail side elevation illustrating the drive-gear. Fig. 4 is a detail plan view, partly in section, of the steering-gear; and Fig. 5 is an enlarged detail front elevation, partly in section, of the carriage.

In the drawings similar letters and numerals designate corresponding parts throughout the several views, referring to which—

A indicates the body or frame of the carriage, and C indicates the rear drive-wheels thereof, which are fixed upon the axle a', which in turn is journaled in suitable bearings upon the body or frame.

B indicates the front or pilot wheels, which are loosely mounted on the axle 18, as better illustrated in Fig. 5 of the drawings.

Fixedly connected to and depending from the bed of the frame A, adjacent to the forward end thereof, is a tube 20^a, which carries a nut or collar 20 at its lower end and is provided with the brace-arms 20^b, connected at one end to the collar 20 and at their opposite ends to the bed of the frame A, as shown.

21 indicates a vertically-disposed rod, which has its lower end 23 bifurcated and pivotally connected to a shield 21^a, which in turn is suitably connected to the axle 18, whereby it will be seen that the weight of the frame will be more equally distributed upon the said axle.

22 indicates a heavy coiled spring, which is mounted upon the rod 21 between the nut or collar 20 and the shield 21^a, and 22^a indicates a coiled spring which surrounds the rod 21 within the tube 20^a and has one of its ends connected to said rod, while its other end bears against the bed of the frame A. By this construction it will be seen that I have provided a coupling between the frame A and the axle, adapted to give to shocks and jars incidental to travel over rough roads and at the same time adapted to withstand the great weight of the frame or body A, and by the provision of such a coupling it will be further seen that the wheels B are free to turn under the frame, so as to enable the operator to turn the carriage within a small space, which is an important desideratum.

Journaled in suitable bearings adjacent to the rear end of the body or frame A is a vertically-disposed rotary shaft Q', upon the upper end of which is fixed a hand-wheel Q, as shown, through the medium of which said shaft may be readily turned. This shaft Q' has fixed upon it a suitable drum 16, around which takes a cable 17, which preferably takes around an idler 19 and has its ends suitably connected to the axle 18, adjacent to the ends thereof, whereby it will be seen that when the shaft is rotated the axle 18 will be revolved to turn the carriage.

In order that the axle 18 may be turned and the vehicle thereby guided by a person upon the forward seat, I have provided a vertical shaft P', which is preferably arranged as shown and carries a hand-wheel P at its upper end. This shaft P' is also provided with a fixed sprocket-wheel 13, which is connected by a chain 15 with a sprocket-wheel 14 upon the shaft Q', whereby it will be seen that when the shaft P' is rotated the shaft Q' will consequently be rotated for the purpose set forth.

G indicates the drive-shaft of an engine, (presently described,) upon which is fixedly mounted a gear-wheel 1, which meshes with a gear-wheel 2 upon the transverse shaft G'. This shaft G' has sprocket-wheels 10 fixed upon its ends, around which take the sprocket-chains 9, which take over idler-wheels 12, as shown, and around the sprocket-wheels 11, as shown. These sprocket-wheels 11 are both keyed or fixed upon the axle a', and one of

said wheels is also keyed or fixed to the adjacent wheel C, so as to permit one wheel to move freely in order to make a sharp turn.

R indicates coiled springs, which are mounted above the chains 9, and are provided at their lower ends with idler friction-wheels or the like to bear upon the chains 9. The upper ends of the springs R are connected to vertically-adjustable rods R′ of suitable construction, which are designed to be adjusted and adjustably fixed to take up the slack in the chains 9.

T indicates an engine, which may be of any ordinary or approved construction and is designed to rotate the drive-shaft G, and D indicates a boiler, which may be of any approved form and is designed to generate steam to actuate the engine. This boiler D, as well as its furnace, which is preferably designed to burn oil, may be fed from tanks or reservoirs carried by the carriage or from other suitable sources of supply, as is most desirable.

Although I have in some instances specifically described the construction and relative arrangement of the several elements of my improved carriage, I do not desire to be confined to the same, as such changes and modifications may be made as fairly fall within the scope of my invention.

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

1. In a vehicle substantially as described, the combination, with the main frame and the axle pivotally connected thereto, of the shaft Q′, carrying a hand-wheel, the drum 16, fixed on said shaft, a cable taking around the drum and having its ends connected to the axle adjacent to the ends thereof, the sprocket-wheel 14, fixed on the shaft Q′, the shaft P′, carrying a hand-wheel, the sprocket-wheel 13, fixed on said shaft P′, and a sprocket-chain taking around the sprocket-wheels 13 and 14, substantially as and for the purpose set forth.

2. In a vehicle substantially as specified, the combination, with the main frame or body and a tube connected to and depending from the frame or body and having a nut or collar at its lower end, of the axle, a rod connected to the axle and extending up into the tube of the frame or body, a coiled spring mounted upon the rod between the axle and the nut or collar of the tube, and a coiled spring mounted upon the rod within the tube and having one of its ends connected to the rod and the other end bearing against the frame or body, substantially as specified.

3. In a vehicle substantially as described, the combination, with the main frame or body and a tube connected to and depending from the frame or body and having a nut or collar at its lower end, of the axle, the shield connected to the axle, the rod pivotally connected to the shield and axle and extending up into the tube of the frame, a coiled spring mounted on the rod between the axle and the nut or collar of the tube, and a spring mounted on the rod within the tube and having one of its ends connected to the rod and the other end bearing against the frame, all substantially as specified.

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

ACHILLE PHILION.

Witnesses:
HELMUTH HOLTZ,
PERCY D. PARKS.