(No Model.)

O. ARMLEDER.

FRONT GEAR FOR VEHICLES.

No. 568,828. Patented Oct. 6, 1896.

Fig. 1.

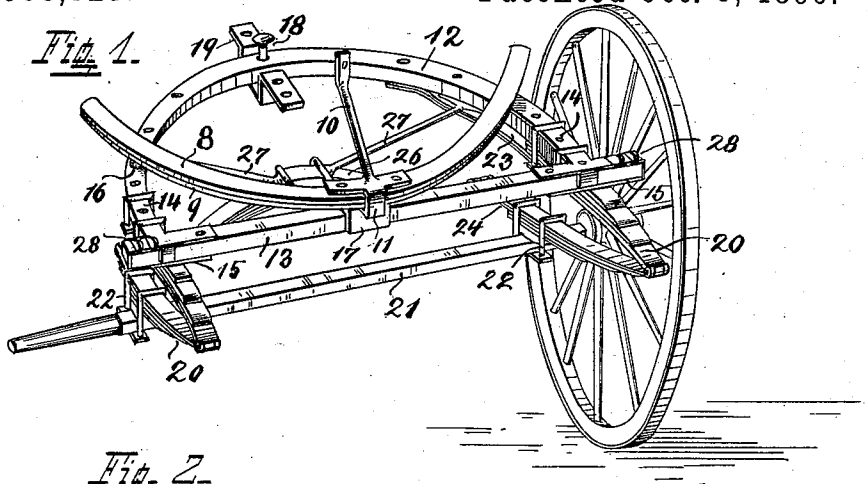


Fig. 2.

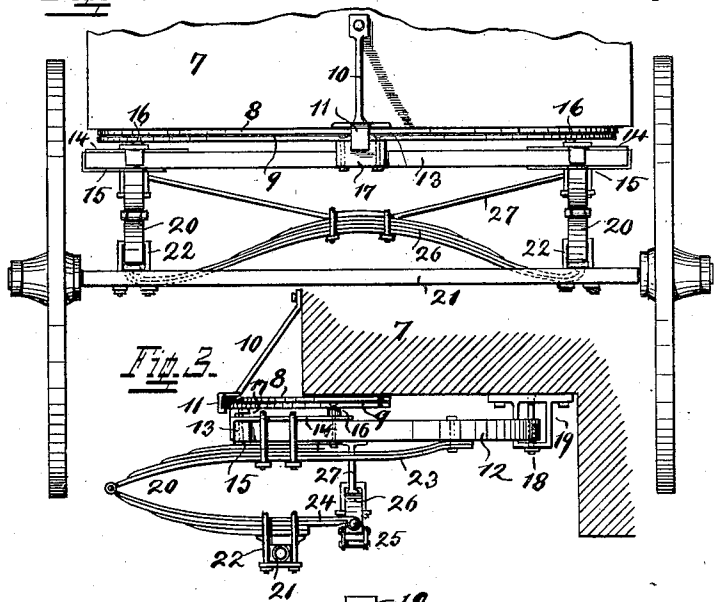
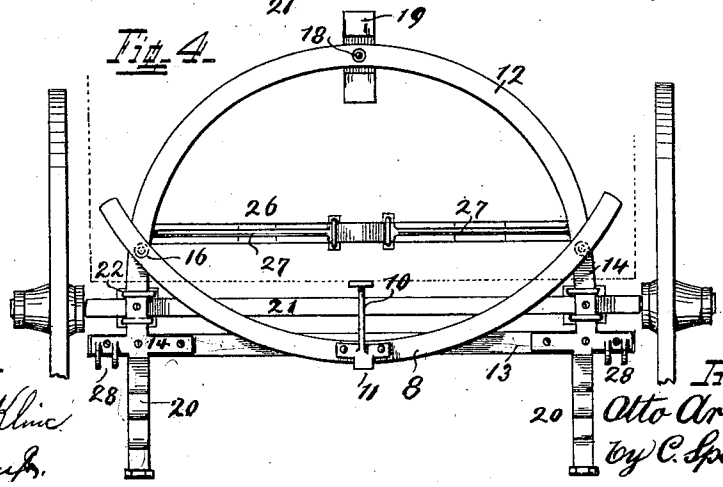


Fig. 3.

Fig. 4.



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OTTO ARMLEDER, OF CINCINNATI, OHIO, ASSIGNOR TO THE O. ARMLEDER COMPANY, OF SAME PLACE.

FRONT GEAR FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 568,828, dated October 6, 1896.

Application filed December 23, 1895. Serial No. 572,960. (No model.)

To all whom it may concern:

Be it known that I, OTTO ARMLEDER, a citizen of the United States, and a resident of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Front Vehicle-Gears; 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, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to a front gear for vehicles, wagons, &c.; and the improvements consist of a simplified construction in general and of a new arrangement and location of the supporting-springs and other parts, whereby the required stability and support are obtained in a practical construction and with lesser parts, which results, consequently, in a great reduction of manufacturing costs. The character of the construction is such as to permit the vehicle to change its direction on a very short turn, permitting the use of high front wheels, which are preferable to low ones, and my invention is therefore well adapted to be used where such is required and on all vehicles having a body depending low between the wheels and where the customary reaches connecting front and hind gears cannot be applied.

Certain details of construction being of advantage to attain all the purposes in view are also explained in the following specification, which contains a full description of my invention, together with its operation and parts.

In the drawings which illustrate the invention, Figure 1 is a perspective view of the larger part of the gear, showing the same disconnected from the body of the vehicle. Figs. 2, 3, and 4 are front, side, and top views of the same complete and of adjacent parts of the body.

7 are parts of the body, which latter is shown in this case as depending to a considerable depth between the wheels for purposes which the special use of the vehicle may require. Its front end is supported by a fifth-wheel, the upper part 8 of which is secured to the under side of the body, near the front end thereof, and beyond which latter it projects, and it rests on the lower part 9, the two parts sliding on each other when the vehicle turns. A brace 10, secured to the body and upper part 8, sustains the projecting part of the fifth-wheel, while a depending lip 11 on said brace reaches around and under the lower part 9 to preserve the contact of the two parts of the fifth-wheel.

The lower part of the fifth-wheel is secured to and supported on a preferably wooden truss consisting of the rearwardly-curved bolster 12, the ends of which are mortised into a rail 13 and held in position therein by plates 14 and 15, reaching over the joining parts above and below and secured by bolts or screws. The lower part 9 of the fifth-wheel rests, however, not immediately on the wooden truss, but as to its ends on posts 16, rising from plates 14, and in its center part on a plate 17 on rail 13, both, that is, posts and plates, secured by bolts, which pass through all parts, that is, in the center through part 9, plate 17, and rail 13 and at the ends also through part 9, through posts 16, and bolster 12. A king-bolt 18, passing through the apex of this curved bolster 12 and sustained by a bracket 19, bolted to the under side of the body, secures the gear to the latter and forms the pivotal support for both. The considerable distance of this pivot back from the front axle permits the short turn, as may be readily understood. The spring-support is furnished by three springs, two half elliptical ones 20, extending outwardly and rigidly secured with their upper ends against the under side of plates 15, being held thereat by clips and with their lower ends to the front axle 21 by clips 22 in the customary manner. One or two of the inner or lower leaves 23 of the upper section of each spring 20 are extended rearwardly and rigidly secured by bolts to the under side of bolster 12 to obtain rigidity and sustain the springs in position.

The inner or upper leaf 24 of the lower sections of each spring is also extended rearwardly, but only sufficient to permit attachment thereat of shackles 25, which support a cross-spring 26, upwardly curved, and which connects and reaches from one spring 20 to

the other one. A double brace 27, rigidly secured by clips to the highest part of spring 26 and also rigidly connected to the under side of bolster 12, furnishes the supporting connection with the upper part of the gear, which thus receives the combined support from all three springs.

28 are clevises at each end of rail 13, preferably forming part of plates 14, which receive the shaft connections.

As will be seen, this gear is well sustained and connected in absence of the usual reaches made impossible by the low depending body, and the arrangement and location of the springs and other parts with reference to the location of the king-bolt permit a very short turn, while many parts found necessary in other constructions have been omitted, greatly simplifying and cheapening the manufacture without detracting from the firmness and reliability of the gear.

Having described my invention, I claim as new—

1. In a front vehicle-gear, the combination of two half-elliptical springs 20 supported on the axle and extending forwardly therefrom, leaves 24 of their lower halves being extended sufficiently rearwardly to permit attachment of shackles 25 and each having a shackle connected thereat, a spring 26 supported on and between these two shackles, a truss supported by the three springs and rigidly connected to them, as to springs 20 by bolts which pass through the rearwardly-extended leaves 23 of their upper halves and the truss and as to spring 26 by a double brace 27 interposed between it and the truss, a fifth-wheel supported by the latter and a king-bolt which connects the gear to the vehicle-body.

2. In a front vehicle-gear the combination of the supporting-springs, a truss supported by them, consisting of the straight front rail 13 and the rearwardly-curved bolster 12, connected thereto, a plate 17 projecting upwardly from rail 13, posts 16 projecting upwardly from bolster 12, a lower fifth-wheel part, which is supported on these parts and connected to them and to the truss below, an upper fifth-wheel part, connected to the vehicle-body and a king-bolt on which the gear swings.

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

OTTO ARMLEDER.

Witnesses:
C. SPENGEL,
ARTHUR KLINE.