

No. 810,679.

PATENTED JAN. 23, 1906.

G. K. RUDERT.
STEERING DEVICE FOR VEHICLES.
APPLICATION FILED MAR. 7, 1905.

Fig. 1.

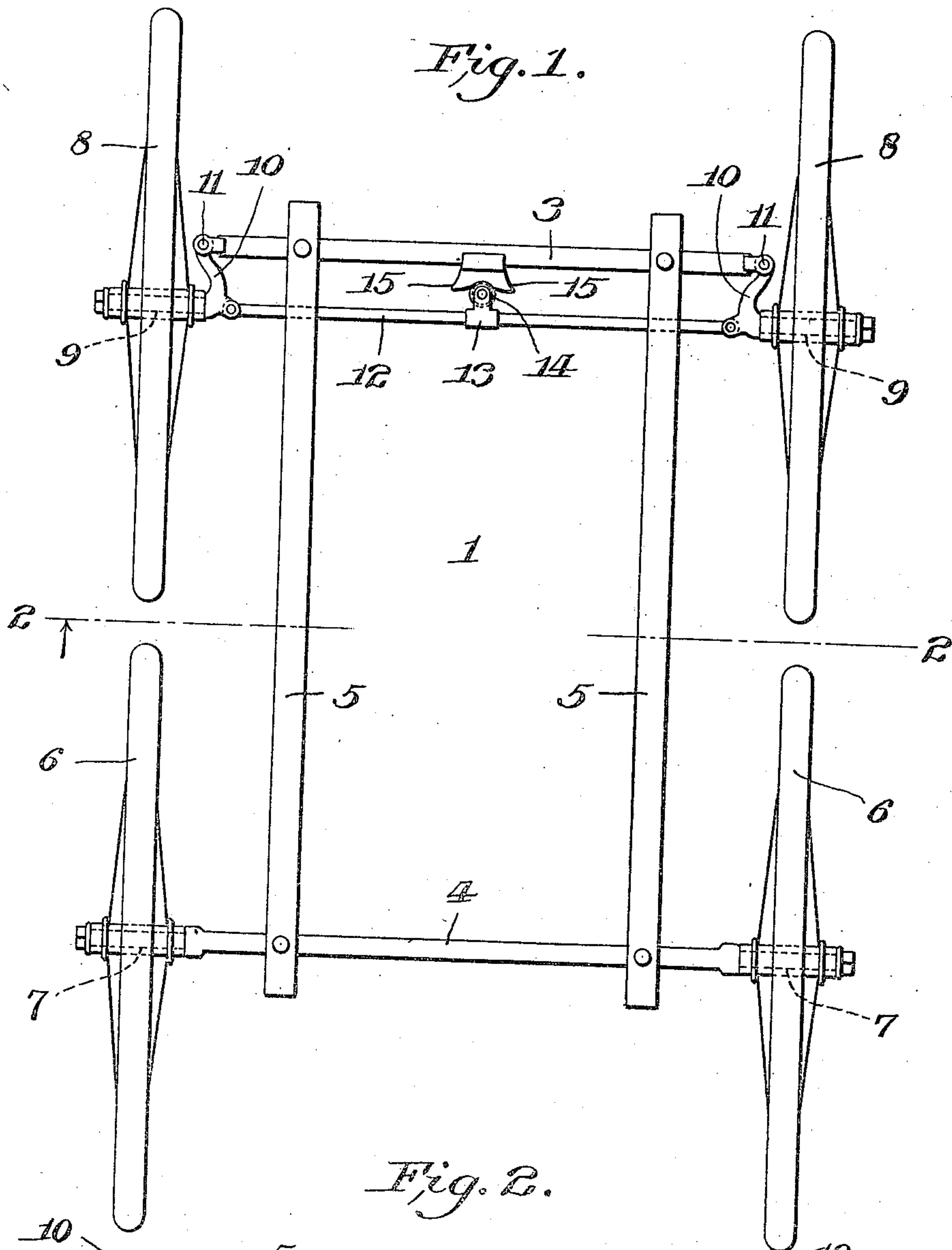
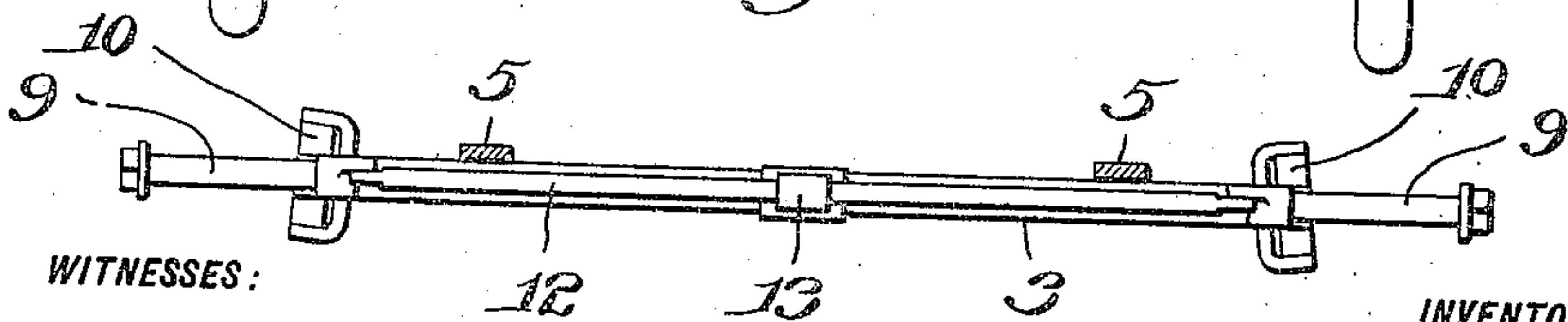


Fig. 2.



WITNESSES:

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STEERING DEVICE FOR VEHICLES.

No. 810,679.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed March 7, 1905. Serial No. 248,839.

To all whom it may concern:

Be it known that I, GEORGE K. RUDERT, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Steering Devices for Vehicles, of which the following is a specification.

My invention relates to vehicles, and especially to vehicles which are adapted to be pushed—such, for example, as baby-coaches and go-carts.

The object of my invention is to provide a simple and efficient steering mechanism whereby the vehicle may be steered to one side or the other with ease and efficiency and whereby the parts may be automatically returned to normal position to permit the vehicle to be moved straight ahead.

Having this object in view, my invention consists in the novel construction and combinations of parts, which will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a plan view of a portion of a vehicle having my invention applied thereto. Fig. 2 is a transverse section, as on the line 2 2 of Fig. 1, the front wheels being removed.

1 designates a framework, which may form a part of the body portion of the vehicle or upon which the body of the vehicle may be mounted. This framework comprises the front and back transverse bars or axles 3 and 4, respectively, and the longitudinal bars 5, connecting the transverse bars 3 and 4.

6 designates the rear supporting-wheels, which are mounted on spindles 7, projecting from the back axle 4, and 8 designates the front supporting-wheels, mounted on oppositely-disposed spindles 9, which are provided on their inner ends with forward extensions 10. The spindles 9 are arranged in alinement and parallel to the spindles 7, and the forward ends of the extensions 10 are pivotally connected to the respective ends of the front axle 3, as at 11, in a manner to pivotally support the framework or body portion 1 of the vehicle forwardly of a line passing through the axes of the spindles 9. Thus it will be seen that the spindles 9, and therewith the forward carrying-wheels 8, may be adjusted on the pivots 11 to vary the angularity of the wheels 8 with respect to the framework 1.

In order to adjust the wheels 8 in unison

and to maintain them in parallelism, I provide a rod 12, which is pivotally connected at its respective ends to the inner ends of the spindles 9 and which lies parallel to the axle 3 when the spindles 9 are in alinement. This rod 12 is made of spring metal, and it is provided about midway of its ends with a bracket 13, carrying a roller 14, which is adapted to bear against two oppositely-disposed cams 15, carried by the front axle 3, the junction of the cams being nearer to the axle 3 than the outer ends thereof. The pressure of the spring-rod 12 forces the roller to the junction of the cams 15, thereby maintaining the spindles 9 normally and yieldingly in alinement. When the spindles 9 and wheels 8 are adjusted out of alinement to vary the angularity of the wheels, the ends of the rod 12 are pressed forward, and the roller 14 rolls outwardly against one of the cams 15. Thus it will be seen that when the pressure employed to move spindles 9 out of alinement is removed the spindles will be automatically returned into alinement, due to the roller 14 being moved to the junction of the cams 15 by the pressure of the spring-rod 12.

The operation of the invention may be briefly described as follows: The spindles 9 are maintained normally in alinement and parallel to the spindles 7 by the action of the spring-rod 12, as hereinbefore explained. In this position of the parts the vehicle may be moved straight ahead. When, however, it is desired to steer the vehicle to one side or the other, any slight pressure exerted upon the vehicle toward either one side or the other will cause a shifting of the spindles 9, and therewith the wheels 8, to direct the vehicle toward the side or in the direction in which the side pressure is exerted. When the side pressure is removed, the action of the spring-rod 12 will automatically return the spindles 9 into alinement, and the vehicle may again be moved straight ahead. The pivoting of the spindles 9 to the body of the vehicle forwardly of a line passing through the axes of the spindles makes the wheels 8 particularly sensitive in responding to the side pressure upon the vehicle during the steering operation.

While I have herein shown and described my invention in a desirable and practicable form, yet I do not limit myself to this particular construction, as the same may be greatly modified without departing from the invention.

I claim—

1. In a vehicle, the combination with the body portion thereof, of a pair of oppositely-disposed spindles each being pivotally connected to the body portion forwardly of a line passing through the axes of the spindles, supporting-wheels on the spindles, said spindles being adapted to be adjusted on their pivots to vary the angularity of the wheels to steer the vehicle, and means for automatically returning said spindles into alinement after the steering operation.

2. In a vehicle, the combination with the body portion thereof, of a pair of oppositely-disposed spindles each being pivotally connected to the body portion forwardly of a line passing through the axes of the spindles, supporting-wheels on the spindles, connections between said spindles whereby they may be adjusted in unison to vary the angularity of the wheels to steer the vehicle, and means for automatically returning said spindles into alinement after the steering operation.

3. In a vehicle, the combination with the body portion thereof, of a pair of oppositely-disposed spindles each being pivotally connected to the body portion forwardly of a

line passing through the axes of the spindles, supporting-wheels on the spindles, a rod pivotally connected at its ends to the spindles whereby they may be adjusted in unison to vary the angularity of the wheels to steer the vehicle, and means for yieldingly maintaining said spindles in alinement.

4. In a vehicle, the combination with the body portion thereof, of a pair of oppositely-disposed spindles each being pivotally connected to the body portion forwardly of a line passing through the axes of the spindles, supporting-wheels on the spindles, a spring-rod pivotally connected at its ends to the spindles whereby they may be adjusted in unison to vary the angularity of the wheels to steer the vehicle, a pair of oppositely-disposed cams, and means on the rod for engaging the cams whereby said cams will cause the rod to automatically return the spindles into alinement after the steering operation.

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

GEORGE K. RUDERT.

Witnesses:

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S. G. DOYLE.