

R. S. RICHESON.
GYROMOTOR.

APPLICATION FILED OCT. 31, 1911.

1,049,264.

Patented Dec. 31, 1912.

3 SHEETS—SHEET 1.

FIG. 1.

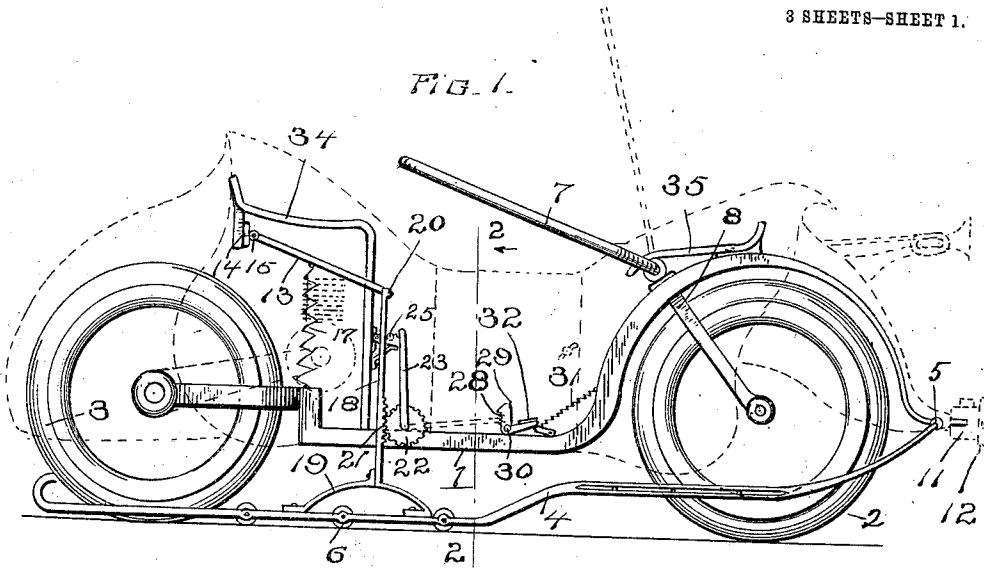


FIG. 2.

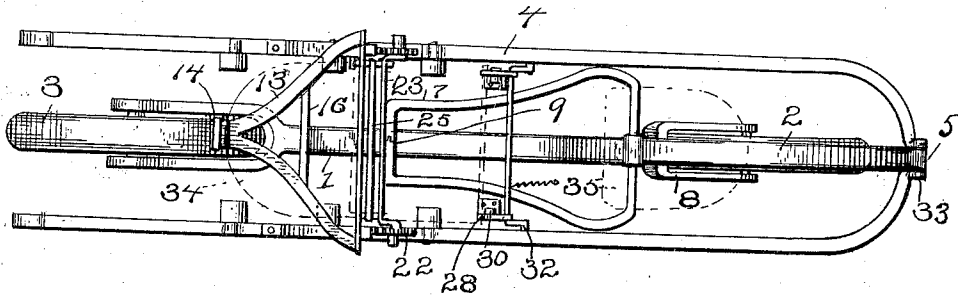
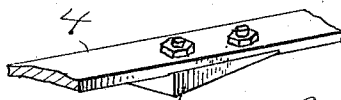


FIG. 6.



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3 SHEETS—SHEET 2.

FIG. 3.

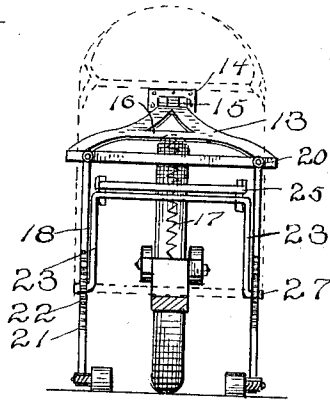


FIG. 4.

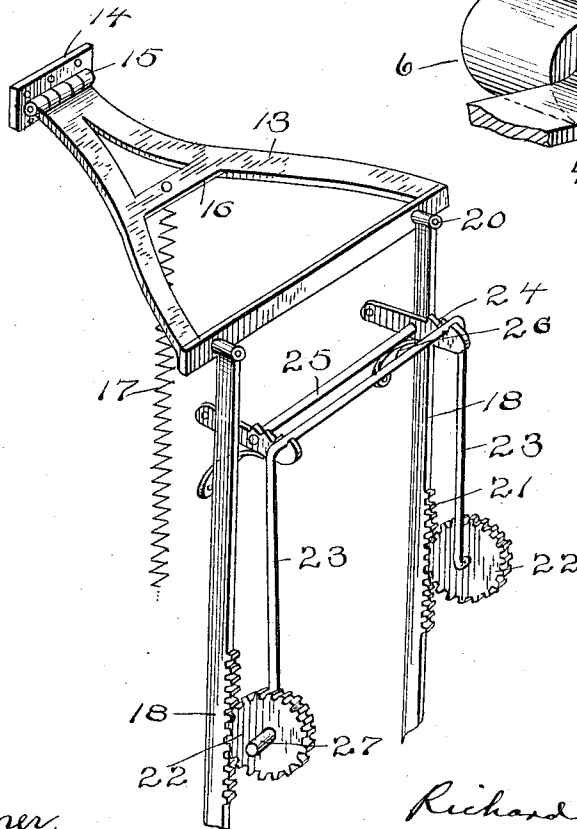
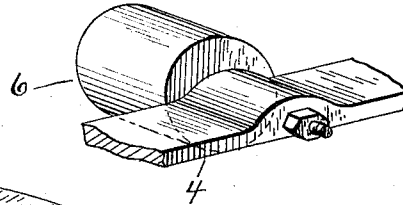


FIG. 5.



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3 SHEETS-SHEET 3.

FIG. 7.

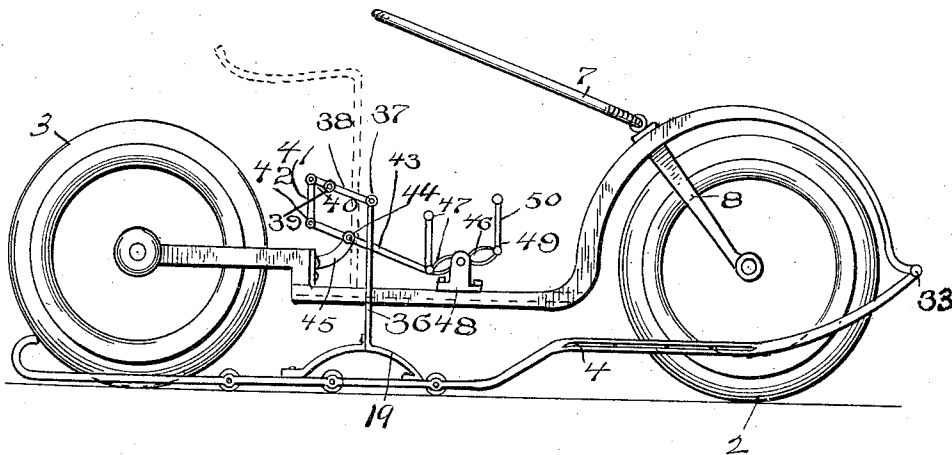
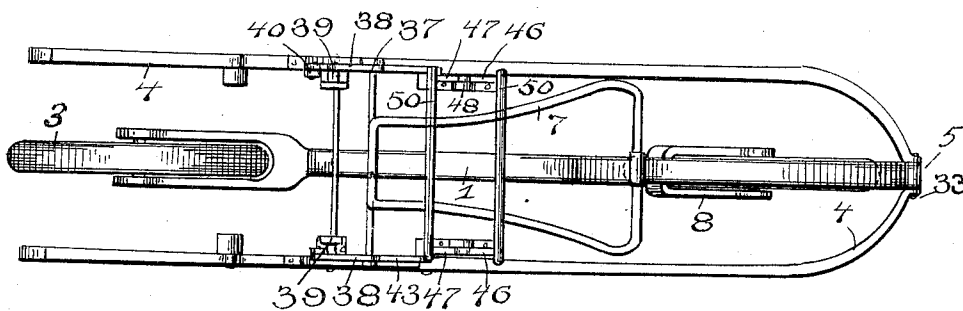


FIG. 8.



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UNITED STATES PATENT OFFICE.

RICHARD SHELTON RICHESON, OF ST. LOUIS, MISSOURI.

GYROMOTOR.

1,049,264.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed October 31, 1911. Serial No. 657,898.

To all whom it may concern:

Be it known that I, RICHARD SHELTON RICHESON, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Gyromotors, of which the following is a specification.

This invention relates to a new type of self-propelling vehicles—the gyromotor. The purpose of the gyromotor is to combine the comfort of automobile travel with the relatively small initial outlay and low maintenance cost of the motorcycle. But this particular invention has to do more definitely and specifically with that part of the gyromotor which we call the runners—gyromotor runners. The purpose of the gyromotor runners is to support the machine when stationary; also when driving extremely slow, as in condensed city traffic. The further purpose of the gyromotor runners is to catch the machine as in emergency cases when the car is running at a great speed and the brakes are thrown on full force very suddenly.

In the drawings forming a part of this specification, and in which like symbols of reference represent corresponding parts in the several views:—Figure 1 is a side view of the device; Fig. 2 a plan view; Fig. 3 a transverse section, on the line 2—2, Fig. 1, looking in the direction of the arrow; Fig. 4 a view of the hinged frame for supporting the runners; Fig. 5 a sectional view of one of the runners with the antifrictional rollers connected to the same; Fig. 6 a sectional modification of the runner, showing an interchangeable shoe in lieu of antifriction rollers; Fig. 7 a sectional side elevation of a modification for controlling the runners; and, Fig. 8 a plan view of the modification.

1 represents the main supporting rib of the machine; 2 and 3 are front and rear wheels thereof; 4 runners having a pivotal support 5 at the front of the device; and 6 antifrictional wheels for the runners.

7 is a handle bar journaled in the top of the fork 8, and having a pivotal connection therewith, so that it may be elevated or depressed, and having enlarged or bulging sides to accommodate the passenger in the front seat; and 9 a joint to connect the ends of the handle-bar, or permit separation of the same, when desired.

10 is an interchangeable shoe adapted to

be connected to the runners in lieu of the rollers, when desired.

11 is the lamp and 12 the buffer on the front of the machine.

13 is a frame for supporting the mechanism for controlling the runners, the same consisting of a plate 14 for connecting it to the frame of the vehicle; 15 a hinge for the same; 16 a cross-piece connecting the sides of the frame; and 17 a spring connecting the supporting frame to the vehicle and holding the same normally depressed.

18 are supporting bars, the same being connected by arched straps 19 to the runners, and having a hinged connection at 20 to the frame 13; and 21 are rack-bars on bars 18.

22 are pinions adapted to operate in the rack bars; 23 operating bars; 24 racks in which the operating bars operate; and 25 a cross-bar connecting the racks.

26 designates springs to hold the cross-bar normally elevated; 27 shafts on the operating bars, by means of which the same is journaled in the main frame and adapted to revolve thereupon; and 28 is a rack formed on the bell-crank 29.

30 is a pin upon which the bell-crank is supported and operates; 31 a spring connected with the rear end of the bell-crank and with the arch of the main rib to hold the same normally forward; and 32 is a pedal adapted to be depressed by the operator to retract the bell-crank, as shown.

33 is a bolt connecting the front ends of the runners to the frame of the machine and permitting movement of the same; 34 the rear seat and 35 the front seat of the machine.

The operation of the device is very simple. When the runners are down, as shown in Fig. 1, and it is desired to elevate the same in the operation of the machine, the rider places his foot on the bar 25, depressing the same against the power of springs 26, releasing the operating rod 23, and at the same time he forces downward the operating rod which immediately rotates the pinions 22 in the racks 21 elevating the runners of the device and locking the operating bar in the rack 28. When it is desired to depress the runners the operator presses the pedal 32, releasing the operating bar and the spring 17 returns the runners to their operative position.

In the modification shown in Figs. 7 and

8, 36 represents the operating bars which are connected to the straps 19 in the usual manner, and are hinged at 37 to arms 38, pivoted at 39 to the main frame of the machine. Arms 38 are in turn hinged at 40 to arms 41, and said arms 41 are hinged at 42 to levers 43. The levers 43 are supported at 44 to brackets 45 connected to the sides of the machine. 46 is a rotating bar, having a spring side 47, and is journaled in supports 48 in the sides of the machine. 49 are rods carrying pedals 50 for the purpose of operating bar 46, the same being adapted to be thrown above and below the point of support in the standards 48 and locked in said positions, as will be apparent.

Having now fully described my invention, and the manner in which it is operated, what I claim as new and desire to secure by Letters-Patent, is:—

1. In a gyromotor, the combination with the supports of the same having pivotal connection to the device, of supporting means for the main supports, said supporting means having pivotal connection to the machine, oscillative shafts journaled on the frame and having connection to the secondary supports so as to throw the main supports into or out of operation, and means for locking the oscillative shafts when operated.

2. In a gyromotor, supporting means for the same, said supporting means having pivotal connection to the front of the machine, supporting rods for the main supports, a

frame hinged to the machine, said frame having a hinged connection to the supporting rods, oscillative shafts journaled in the frame of the machine and having connection to the supporting rods thereof, and means for locking the oscillative shafts when operated.

3. In a gyromotor, runners for the same, means for supporting the runners from the gyromotor, rack-bars on the supporting means, pinions engaging the rack-bars for elevating and depressing the supporting means, means for locking the operating means, a spring normally holding the runners in their operative position, and bars for operating the pinions.

4. Supporting means for a gyromotor, consisting of runners having pivotal connection to the same, supporting rods for the runners, said supporting rods having rack-bars, pinions engaging the rack-bars, a frame having pivotal connection to the supporting means, levers adapted to elevate and depress the runners through the medium of the rack and pinion, means for locking the runners in their operative or inoperative positions, and antifriction means connected to the runners.

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

RICHARD SHELTON RICHESON.

Witnesses:

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