

No. 710,249.

Patented Sept. 30, 1902.

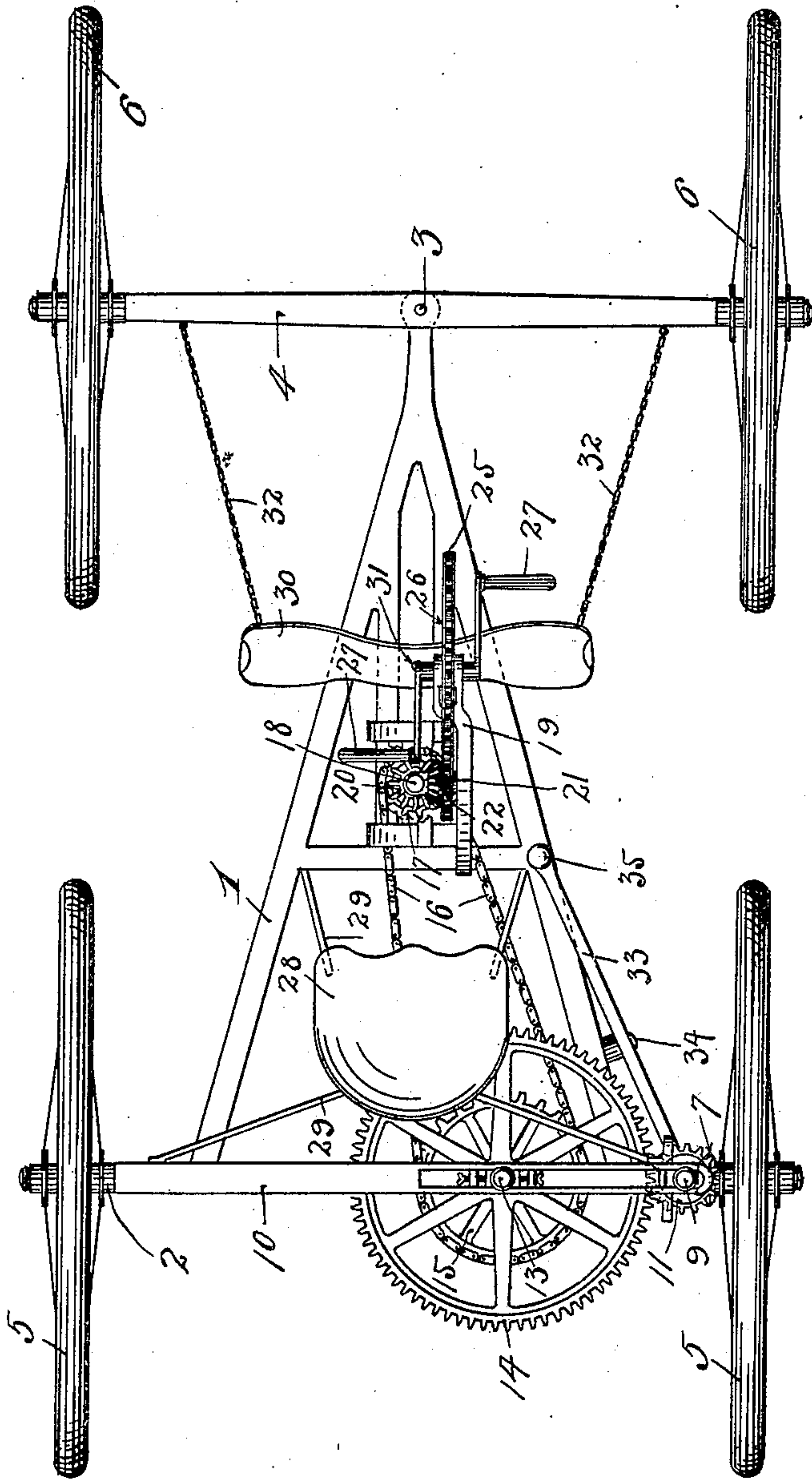
P. CHRISTIANSSON.
ROAD VEHICLE.

(Application filed Nov. 30, 1901.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



Witnesses.
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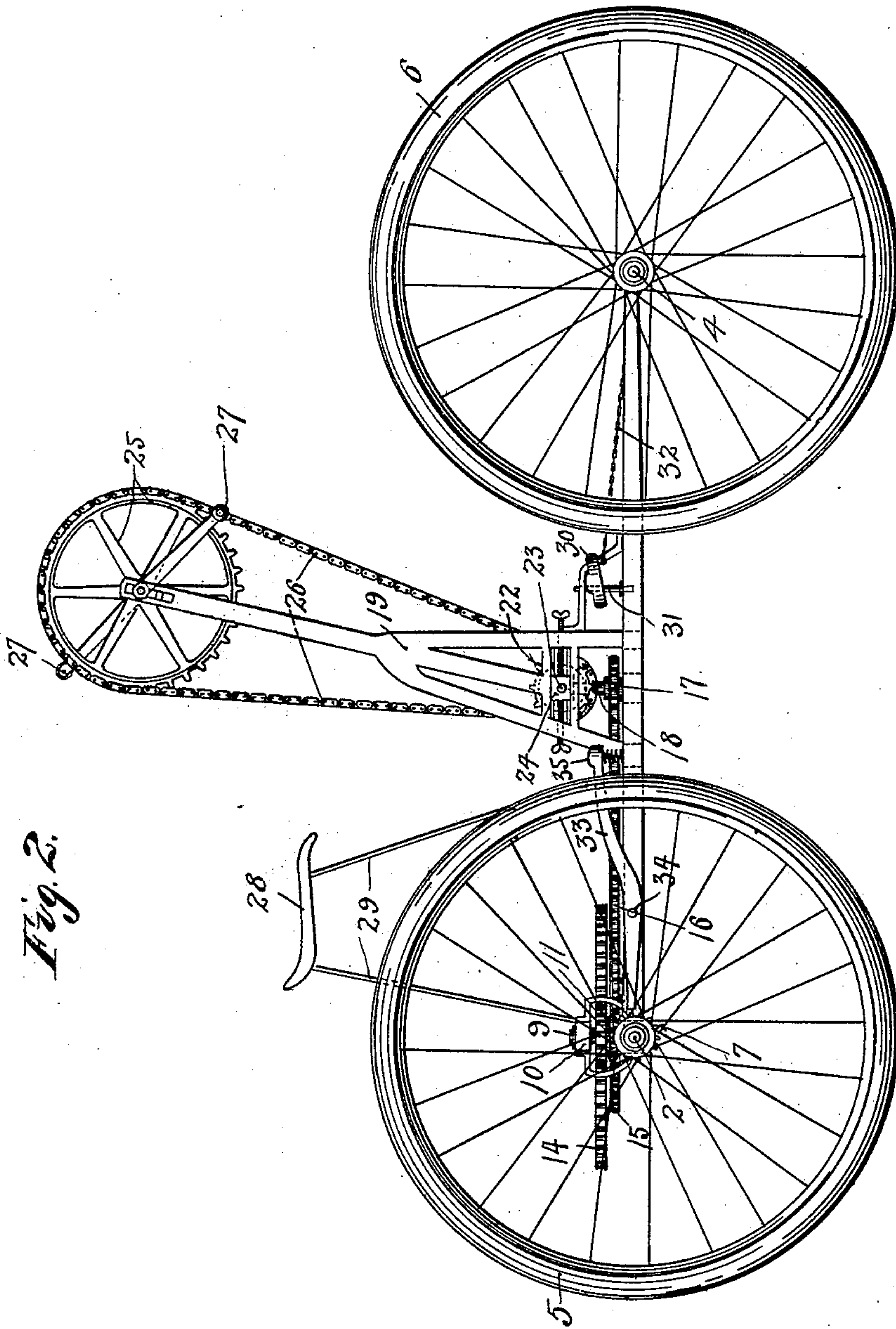
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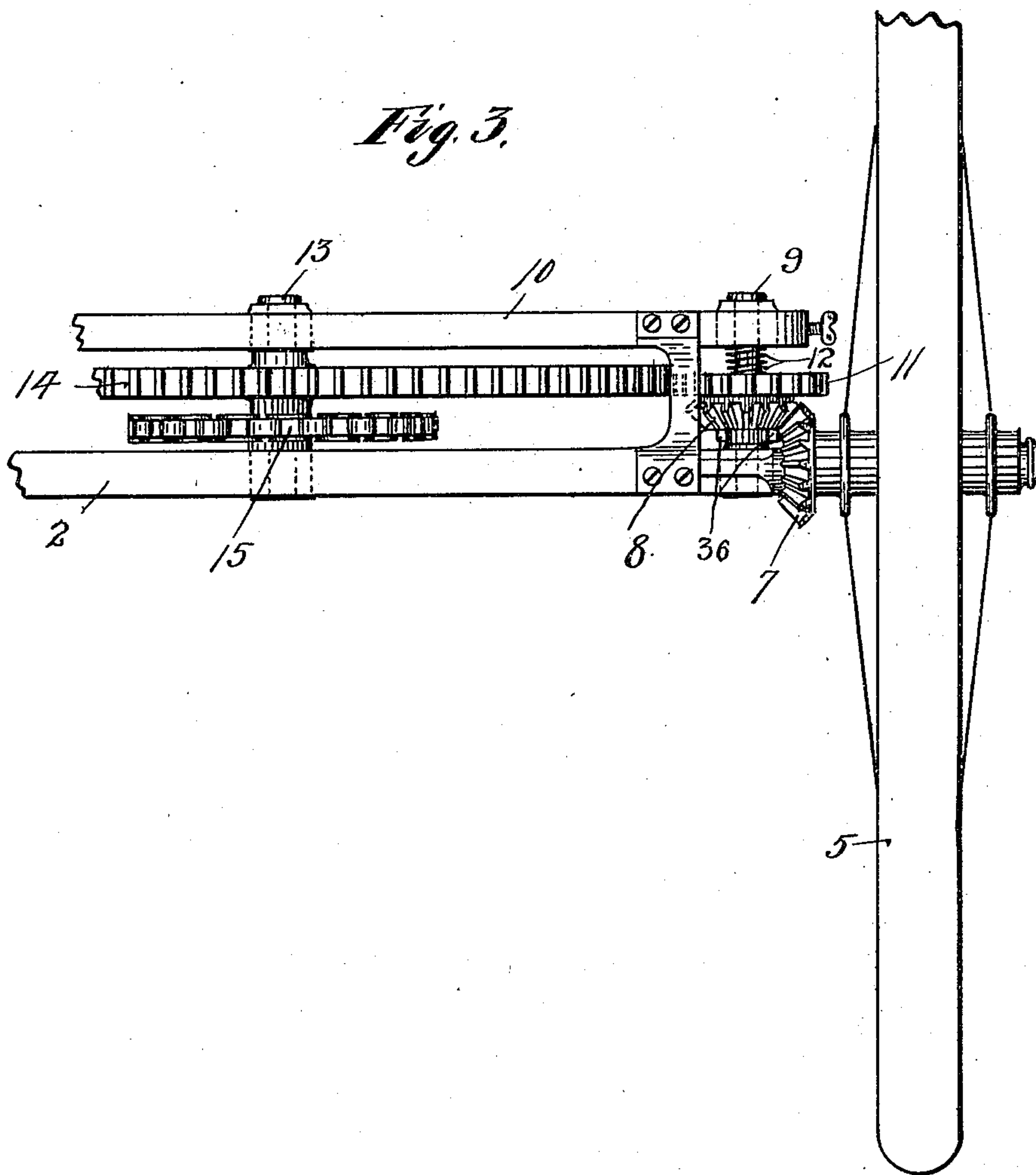
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

PEHR CHRISTIANSSON, OF SCRIVEN, MINNESOTA.

ROAD-VEHICLE.

SPECIFICATION forming part of Letters Patent No. 710,249, dated September 30, 1902.

Application filed November 30, 1901. Serial No. 84,165. (No model.)

To all whom it may concern:

Be it known that I, PEHR CHRISTIANSSON, a citizen of the United States, residing at Scriven, in the county of Douglas and State of Minnesota, have invented certain new and useful Improvements in Road-Vehicles; and I do hereby 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 for its object to provide an improved road cycle or vehicle which is propelled by the power of the rider; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a plan view of a machine designed in accordance with my invention. Fig. 2 is a side elevation of the same; and Fig. 3 is a view in rear elevation with parts broken away, showing a portion of the machine, and especially showing the device for throwing the driving-gear into and out of action.

The numeral 1 indicates a horizontally-extended triangular frame rigidly secured at its base end to the rear axle 2 and pivotally connected at its apex or forward end at 3 to the forward axle 4. Wheels 5 are mounted on the axle 2, and similar wheels 6 are mounted on the pivoted forward axle 4. These wheels 5 and 6 are preferably of the type known as "bicycle-wheels," and they are advisably mounted on ball-bearings in the usual way. One of the rear wheels—to wit, as shown, the right-hand member—serves as a traction-wheel and is provided on its hub with a beveled gear 7, with which meshes a cooperating beveled gear 8, mounted for vertical movement on a stud 9, supported by the axle 2 and by an overhead section 10 of the framework. Said beveled gear 8 is shown as cast integral with the spur-pinion 11. A coiled spring 12, placed between the gear 11 and the end of the frame-bar 10, around the stud 9, assists gravity to normally hold downward the said two gears 8 and 11 and the former in mesh with the cooperating gear 7. Also supported by the axle 2 and overhead bar 10 is a short

vertical shaft 13, on which is loosely mounted a large spur-gear 14, which meshes with the pinion 11 and has such a wide face that said pinion 11 and gear 8 may be raised vertically far enough to throw said gear 8 out of mesh with the gear 7 without throwing the said pinion 11 out of mesh with the gear 14. A sprocket-wheel 15 is shown as cast integral with the gear 14. 16 indicates a sprocket-chain which runs over said sprocket 15 and over a relatively small sprocket 17, secured on the short vertical shaft 18, suitably mounted in the frame 1 and in the foot portion of a braced pedestal 19. A beveled pinion 20 is secured to the upper end of the shaft 18, and a cooperating beveled pinion 21 meshes therewith. Said pinion 21 is cast integral with a sprocket-wheel 22, and both are mounted on a stud 23, shown as carried by an adjustable block 24, mounted in suitable guides in the base of the standard 19. At the upper end of the standard 19 is loosely mounted a large sprocket 25, over which and the sprocket 21 runs a sprocket-chain 26. The sprocket 25 is provided with a pair of hand-cranks 27, located one on each side thereof and extending radially one hundred and ninety degrees ahead of the other. The hand-cranks 27 are thus located in position to be readily engaged by the hands of the rider while seated on the seat 28, which seat may be supported in any suitable way, but is shown as supported by legs 9, which rise from the main frame 1 and rear axle 2. The rider while seated on the seat 28 places his feet on a combined foot-rest and steering-lever 30, which is pivoted at 31 to the main frame 1 and is connected at its ends to the pivoted front axle 4 by chains or other suitable connections 32. It is evident that the rider thus seated by manipulating the lever 30 with his feet may readily steer the machine in any desired direction.

To throw the driving-gear out of action, so that the machine will run free in the act of coasting or running down hill, a lever 33 is pivoted to the frame 1 at 34. At its forward end this lever 33 is shown as provided with a heel-piece 35, and at its rear end it is pronged at 36 for engagement with the under hub portion of the vertically-movable beveled gear 8. As is evident, when the rider steps upon the heel-piece 35 of the lever 33 the gears 8 and

11 will be raised and the driving-gear will be thrown out of action. In other words, the traction-wheel having the gear 7 will be released from the driving-gear and permitted
5 to run free.

As already indicated, the machine will be driven by the rotation of the hand-cranks 27, and the speed will be multiplied in rotations from the hand-crank to the traction-wheel
10 through the driving-gear described. Otherwise, briefly stated, the rider drives the machine with his hands and steers the same with his feet.

It will be of course understood that the machine above described is capable of many
15 modifications as to details of construction within the scope of my invention as herein claimed.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:
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In a machine of the character described, the combination with a traction-wheel having a gear 7, of a drive therefor involving the gear 14, the vertically-movable gears 8 and 11, the former engaging the gear 7, and the
25 latter said gear 14 and operating as described, of the foot-operated lever 33 pivoted at 34 and acting on said gears 8 and 11 to throw the former into and out of engagement with the
30 coöperating gear 7 and means for driving said traction-wheels involving cranks located in position to be engaged by the rider's hands, substantially as described.

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

PEHR CHRISTIANSSON.

Witnesses:

ELIZABETH KELEHER,
F. D. MERCHANT.