No. 668,769.

Patented Feb. 26, 1901.

J. BREAK.

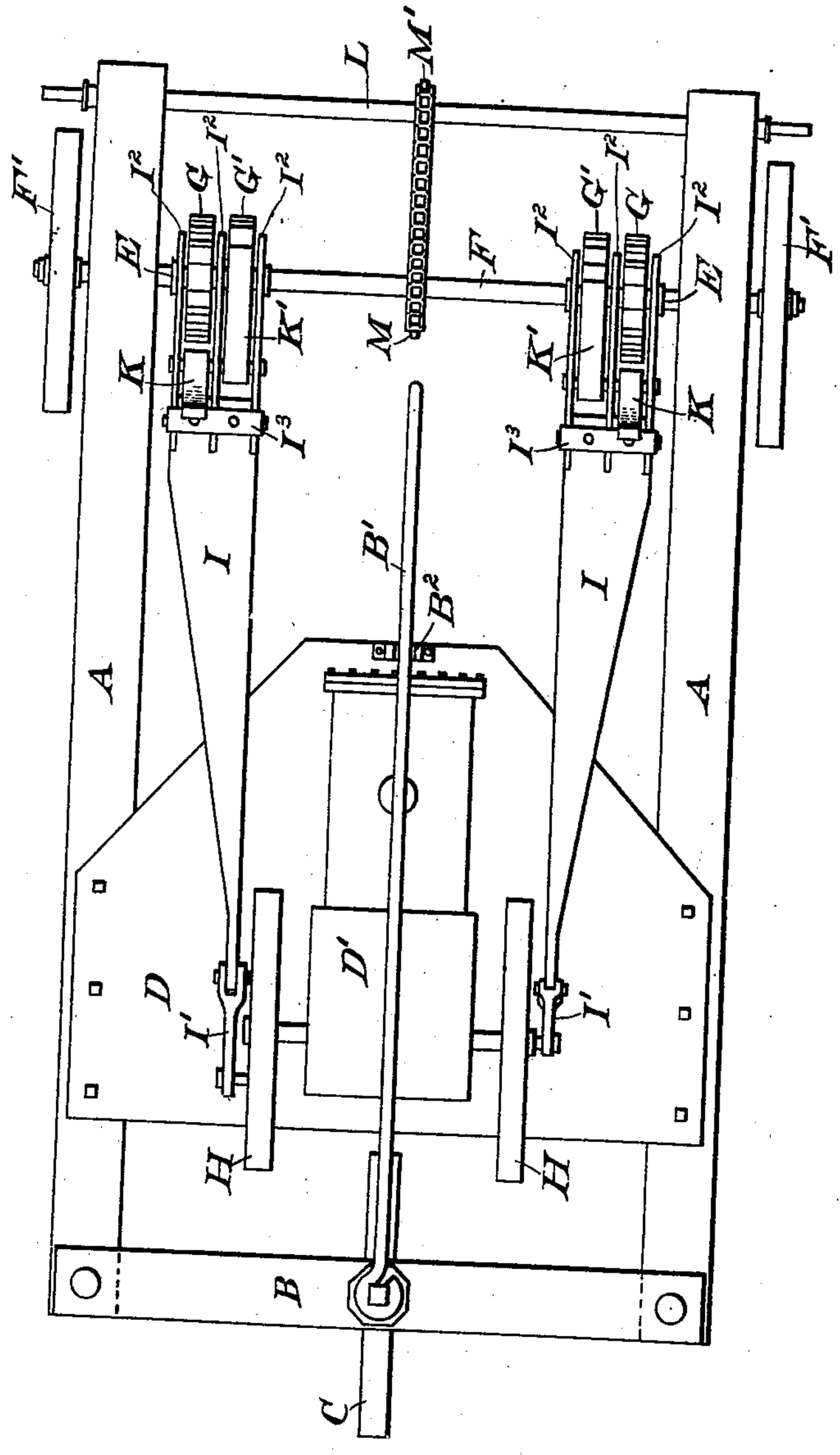
AUTOMOBILE.

(No Model.)

(Application filed May 21, 1900.)

2 Sheets—Sheet 1.

Fig. 1.

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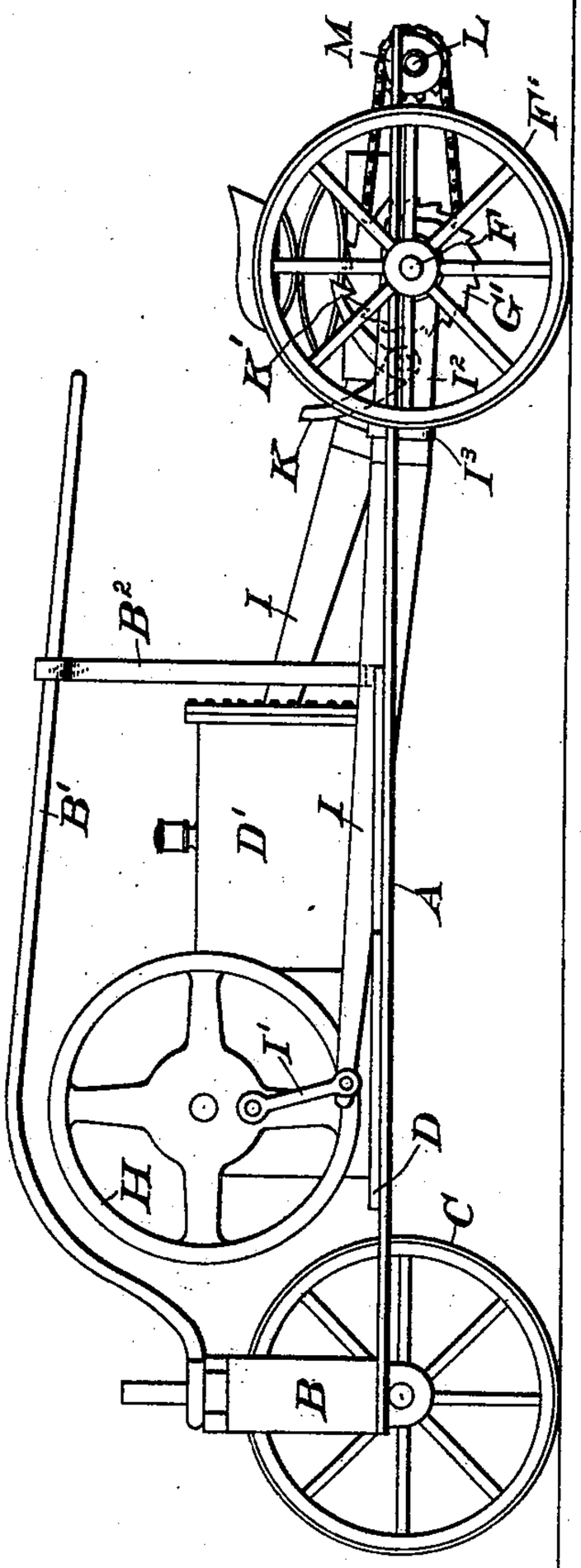


Fig. 2.

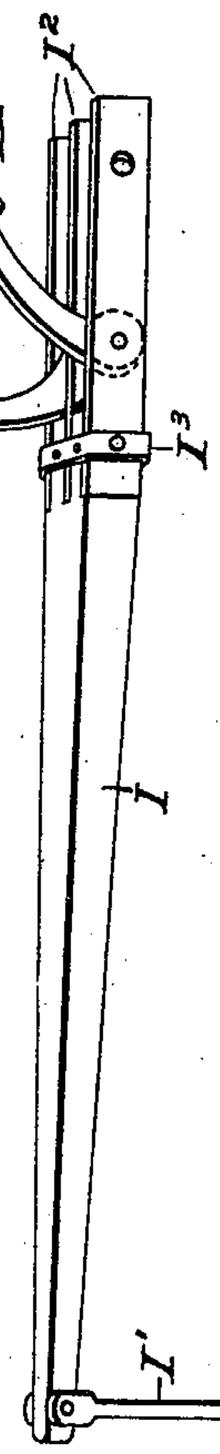


Fig. 3.

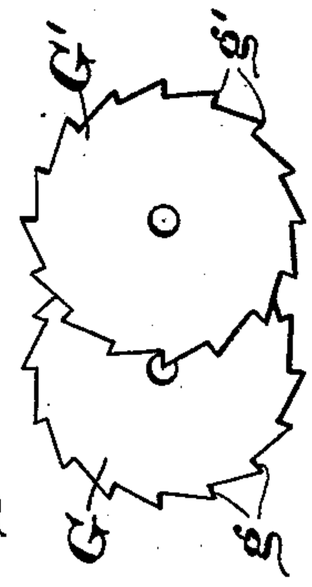


Fig. 4.

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# UNITED STATES PATENT OFFICE.

JOSEPH BREAK, OF SPOKANE, WASHINGTON.

## AUTOMOBILE.

SPECIFICATION forming part of Letters Patent No. 668,769, dated February 26, 1901.

Application filed May 21, 1900. Serial No. 17,504. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH BREAK, of Spokane, in the county of Spokane, State of Washington, have invented a new and useful Machine or Conveyance, of which the following is a specification.

I took out my first papers to become a citizen of the United States March 27, 1900, and was born in the county of York, now in the Province of Ontario, Dominion of Canada.

My invention relates to improvements in motor-vehicles adapted either for use as an automobile or for drawing loads or farm machinery or as a motor gun-carriage.

The invention consists, first, in a novel manner of communicating motion from the engine to the driving-wheels, whereby the vehicle may be propelled backward or forward.

It further consists in a novel manner of providing for changing the speed and providing for the exertion of greater power when the speed is diminished.

It further consists in providing the vehicles with a series of axles, each propellable at a different speed, to either of which the traction-wheels may be applied or connected, whereby by the changing of the wheels from one axle to another the speed of the vehicle may be changed, all as hereinafter described.

In the accompanying drawings, Figure 1 is a plan or top view of a motor-vehicle with my improvement applied; Fig. 2, a side elevation. Fig. 3 is a detail showing one of the propelling-levers and dogs or pawls. Fig. 4 shows the ratchet-wheels.

Like letters of reference denote corresponding parts in all the figures.

A represents longitudinal frame bars or timbers connected at their forward ends through a yoke B, and mounted in said yoke centrally of its width is the steering-wheel C, hereinafter referred to. In rear of the yoke is placed a platform D, upon which the engine D′ is mounted, preferably having its power evolved from the explosion of gasolene and which may be constructed in any usual or preferred manner.

In a suitable bearing E, secured to the frame-timbers A near their rear ends, is the driving-axle F, on which the traction-wheels F′ are mounted when the vehicle is to be driven at a normal speed or the speed is to be changed directly from the engine, as hereinafter referred to. Mounted on the axle and rigidly secured thereto are ratchet-wheels G G′, two on each side, adjacent to the frame-bars, each pair being provided with reversely-inclined teeth *g g′*.

The motor is provided with a fly or balance wheel H on each end of its driven shaft, and to a wrist-pin projecting from the face of said wheels are connected levers I through links I′, the rear ends of the levers being supported on bars or plates $I^2$, supported on the axle, one on each side of the ratchet-disks and one between them, being held in proper alinement by straps $I^3$. Mounted between the bars or plates are pawls K K′, one a plain nose-pawl which engages the ratchet-disk, which acts to propel the vehicle backward, while the other pawl is provided with a hooked end which engages the ratchet-disk, which acts to propel the machine forward, by which construction and arrangement of parts it will be seen that all that is necessary to change the direction of movement of the vehicle will be to throw the corresponding pawls on each side into or out of action, causing the machine either to run forward or backward, as is desired, without reversing or stopping the motor or engine and which may be done either by hand or by any mechanism found desirable and one which will readily suggest itself to those skilled in the art.

For changing the speed of the vehicle or varying the same from a normal road speed to slow speed with increased power when the vehicle is used for propelling heavy loads or for farm purposes, such as plowing, &c., by varying the point of attachment of the links I′ with the fly-wheel to or from the center thereof the throw of the lever will be changed or cause the pawls to rotate the ratchets a distance equal to the length of one, two, or more pawls, and consequently impart either a quick movement or a slow and steady pull thereon in a manner that will be readily understood.

Mounted in suitable bearings in rear of the main axle is a second axle L, properly fitted to receive the wheels F′ and which I term a "speed-axle." This axle has mounted upon

it a sprocket-wheel M, and mounted on the main axle in line with said sprocket-wheel M is another sprocket-wheel M′ of larger diameter, corresponding in size to the increased speed it is desired to impart to the speed-axle over the main driven axle. Any number of axles may be employed, mounted in the frame in a similar manner, according to the increased speed it is desired to impart to the vehicle, the wheels being changed from one axle to the other, as will be readily understood.

The driving-wheel is swiveled in the yoke B and has connected thereto a steering rod or handle B′, suitably supported in a plate or quadrant $B^2$, secured at a suitable point on the frame of the vehicle. The machine, however, if desired, may be provided with four wheels, and any suitable form of brake may be employed, as found desirable.

The machine is adapted for use either as a pleasure-vehicle by mounting a suitable box similar to a buggy or carriage upon the frame with suitable springs or may be used as a gun-carriage having a suitable armor-plate, &c., or it may be used on farms either for drawing loads or plowing or for other purposes found desirable.

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

1. In a motor-vehicle, the combination of the motor, a driven axle, reversely-arranged ratchet-disks mounted on the axle, pawls to engage the disks, and levers actuated by the engine to move the pawls to rotate the disks, substantially as described.

2. In a motor-vehicle, the combination with a driven axle fitted to receive the wheels, of a speed-axle similarly fitted and means for imparting an accelerated or increased speed to the second axle from the main driven axle, substantially as described.

3. In a motor-vehicle, the combination of the motor, a driven axle, reversely-arranged ratchet-disks mounted on the axle, pawls to engage the disks, levers actuated by the motor to move the pawls to rotate the disks, a second axle fitted to receive the traction-wheels, and mechanism connecting the two axles for imparting an accelerated or increased speed to the second axle, substantially as described.

JOSEPH BREAK.

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