(No Model.)

J. V. MOTTER.

DRIVING MECHANISM FOR CARS.

No. 479,915. Patented Aug. 2, 1892.

Fig. 1.

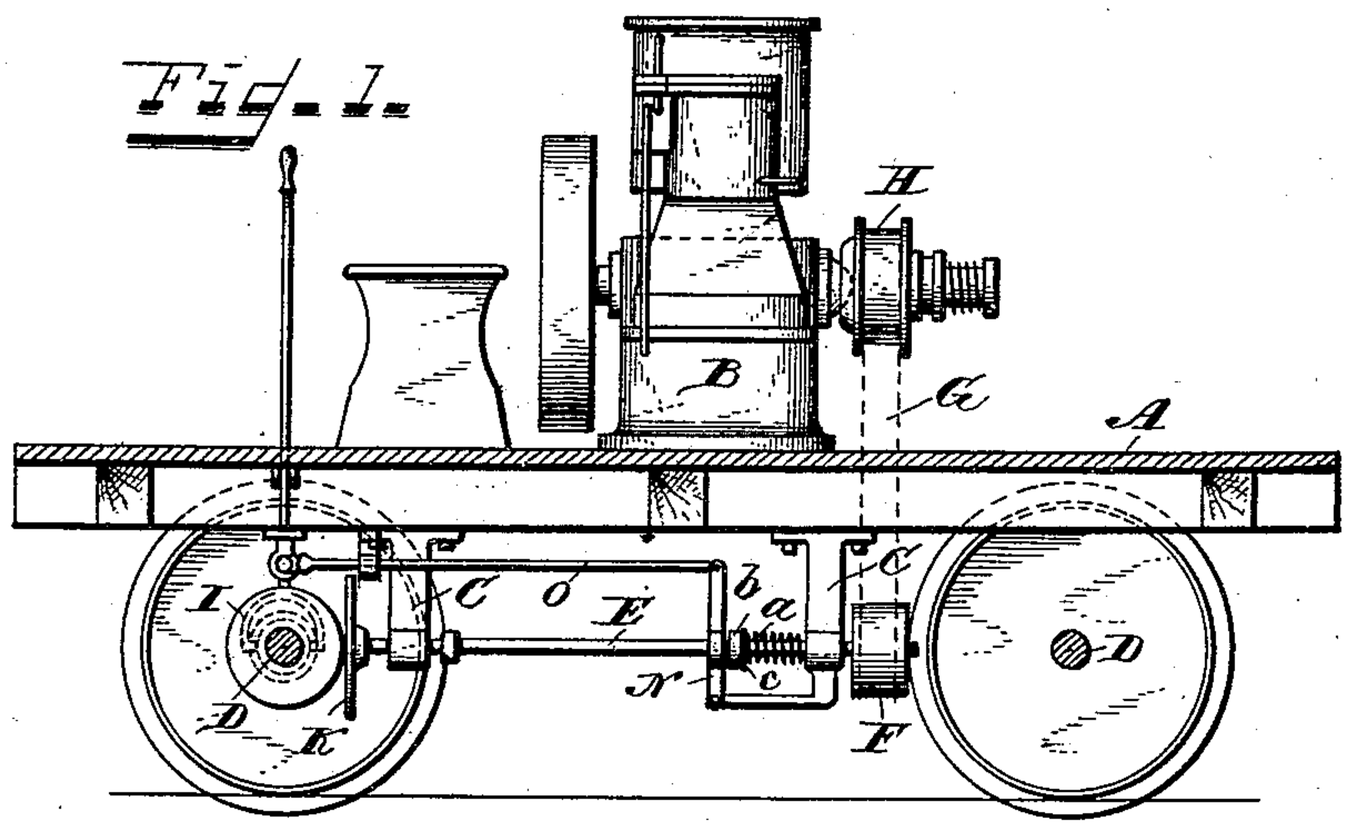


Fig. 2.

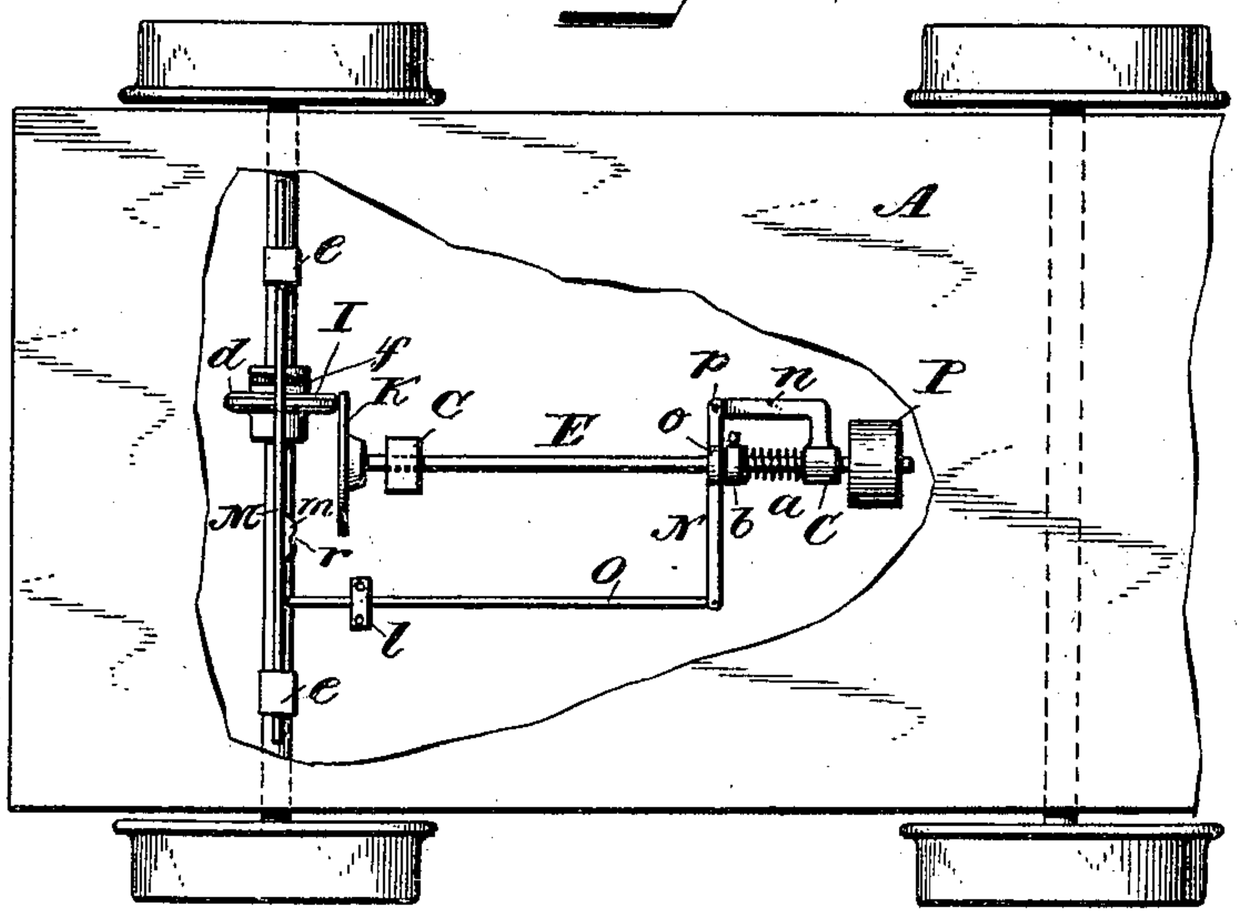


Fig. 4.

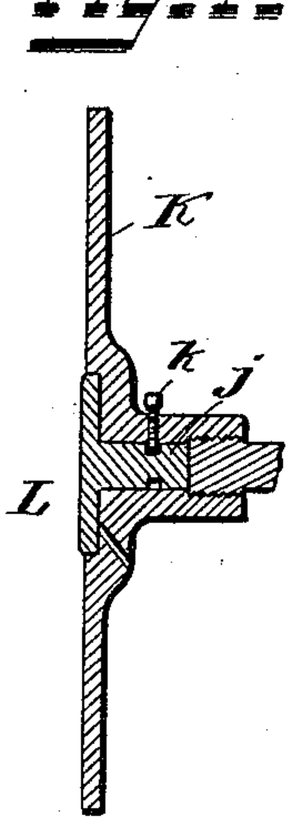
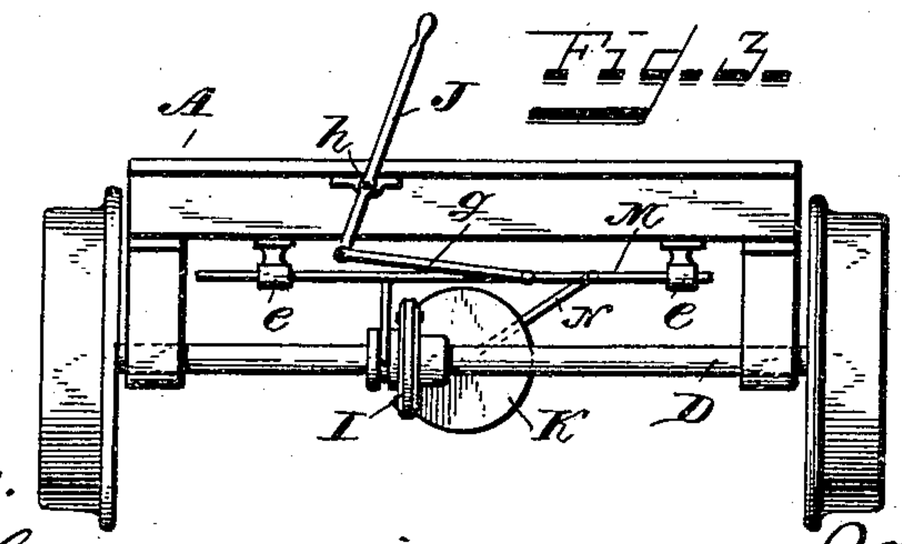


Fig. 3.



Witnesses.

J. Thomson Cross.

E. W. Hardingham

Inventor.

Jacob V. Motter

by Chapin Brock

his Attorney.

UNITED STATES PATENT OFFICE.

JACOB V. MOTTER, OF BROOKLYN, NEW YORK.

DRIVING MECHANISM FOR CARS.

SPECIFICATION forming part of Letters Patent No. 479,915, dated August 2, 1892.

Application filed March 31, 1892. Serial No. 427,193. (No model.)

To all whom it may concern:

Be it known that I, JACOB V. MOTTER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Driving Mechanisms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates, primarily, to motor mechanisms for cars, though it is capable of other uses; and it has for its object the improved construction of the same.

The novelty of my invention will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal section in side elevation of an inspection-car for railways, showing the application of my invention. Fig. 2 is a plan view of the same with part of the deck of the car broken away to show the mechanism beneath. Fig. 3 is a front elevation of the same. Fig. 4 is a sectional detail of a modified form of driving-disk.

The same letters of reference are used to indicate identical parts in all the figures.

A represents an inspection-car of the usual or any suitable construction, and B any suitable motor mounted on the bed of the car. I prefer, however, to use as a motor any of the well-known gasoline-engines which have no means of reversing.

Journaled in the hangers C beneath the bed of the car and in the plane of its axles D is a shaft E at right angles to the axles. This shaft is constantly pressed in one direction by a spring *a*, coiled around it and bearing at one end against a collar *b* on the shaft with an interposed washer *c* and at the other end against the adjacent hanger C. Fast upon the shaft E is a pulley F, driven by a belt G from a pulley H on the motor-shaft.

Feathered upon one of the axles D is a friction-wheel I, whose bearing-periphery is preferably made of wood *d*, inserted in an annular groove and secured by bolts. The hub of this pulley has on one side a circumferential groove *if*, in which fits a shifting-fork projecting from a horizontal sliding bar M, guided in hangers *e*, connected by a pivoted link *g* to the lower end of a lever J, pivoted, as at *h*, in any suitable manner.

Fast upon the end of the shaft E adjacent to the wheel I is a friction-disk K, whose face is pressed by the spring *a* against the wheel I for driving the wheel I and propelling the car in either direction desired, according to the position of the wheel I on either side of the axis of the shaft E. By means of the lever J the position of the wheel I may be shifted across the face of the disk K from its center to its periphery in either direction, as will be readily understood. When the wheel I is at the center of the disk K, it will not revolve, and to prevent grinding or wear at such times I employ a link O, guided in a bearing *l* and having its rear end pivoted to a lever N, pivoted, as at *p*, to an extension *n* of the hanger C. The lever N has a collar *o*, surrounding the shaft E and bearing against the collar *b*. Upon the rear side of the shifter-bar M is a cam projection *m*, which when the lever J is vibrated to bring the wheel I near the center of the disk K engages the end of the link O and presses it back, thereby causing the lever N to press back the shaft E and throw the disk K out of contact with the wheel I, as will be readily understood. A retaining-notch *r* is provided at the middle of the cam *m*, into which the forward end of the link O fits to hold the shifting parts from accidental displacement; or to accomplish the same result, as seen in Fig. 4, I recess a loose disk L in the face of the disk K at the center and whose stem *j* enters a bore in the hub of the disk and is held by a screw or pin *k*, whose inner end is confined in a circumferential groove in the stem. By the latter construction when the wheel I comes over the disk L it will stop, for the revolution of the disk K is not imparted to the disk L. In this simple manner and by the use of a single shifting-lever I can stop, start, regulate the speed, and go in either direction desired while the motor continues its action.

I am aware that it is not new to drive a flat-faced friction-disk by means of a friction-wheel and to provide means for shifting said wheel entirely across the face of the disk; but my construction is the exact reversal of this, as the friction-disk is used to transmit power, and not the friction-wheel.

Having thus fully described my invention, I claim—

1. The combination, with a propelling-shaft and a friction-wheel feathered so as to slide thereon, of a friction-disk for said wheel, means for shifting said wheel, means for disengaging the contact of said wheel and disk when the former is at or near the center of the latter, and a single lever for operating both of said means, substantially as described.

2. The combination of the axle D, the friction-wheel I, feathered thereon, the lever J with connections for shifting said wheel, a friction-disk for said wheel I, the shaft E, carrying said disk, and a motor for driving the shaft E, substantially as described.

3. The combination of the axle D, having the friction-wheel I feathered thereon, means for shifting said wheel, the shaft E, a friction-disk on said shaft for the friction-wheel, the spring *a* for the shaft E, and a motor for driving said shaft, substantially as described.

4. The combination of the axle D, having the friction-wheel I feathered thereon, the shaft E, carrying the friction-disk, the shifter M for the wheel I, having the cam *m*, the lever N, and link O, connected to the shaft E, and the lever J, connected to the shifter M, whereby when the wheel I approaches the center of the disk K from either direction the cam *m* engages the link O and disengages the disk K from the wheel I, substantially as described.

JACOB V. MOTTER.

Witnesses:
J. THOMSON CROSS,
E. W. HARDINGHAUS.