No. 868,208. PATENTED OCT. 15, 1907.

A. S. MOORE.

DEVICE FOR PREVENTING SLIPPING OF MOTOR DRIVEN VEHICLES.

APPLICATION FILED AUG. 17, 1906.

2 SHEETS—SHEET 1.

Fig. 1

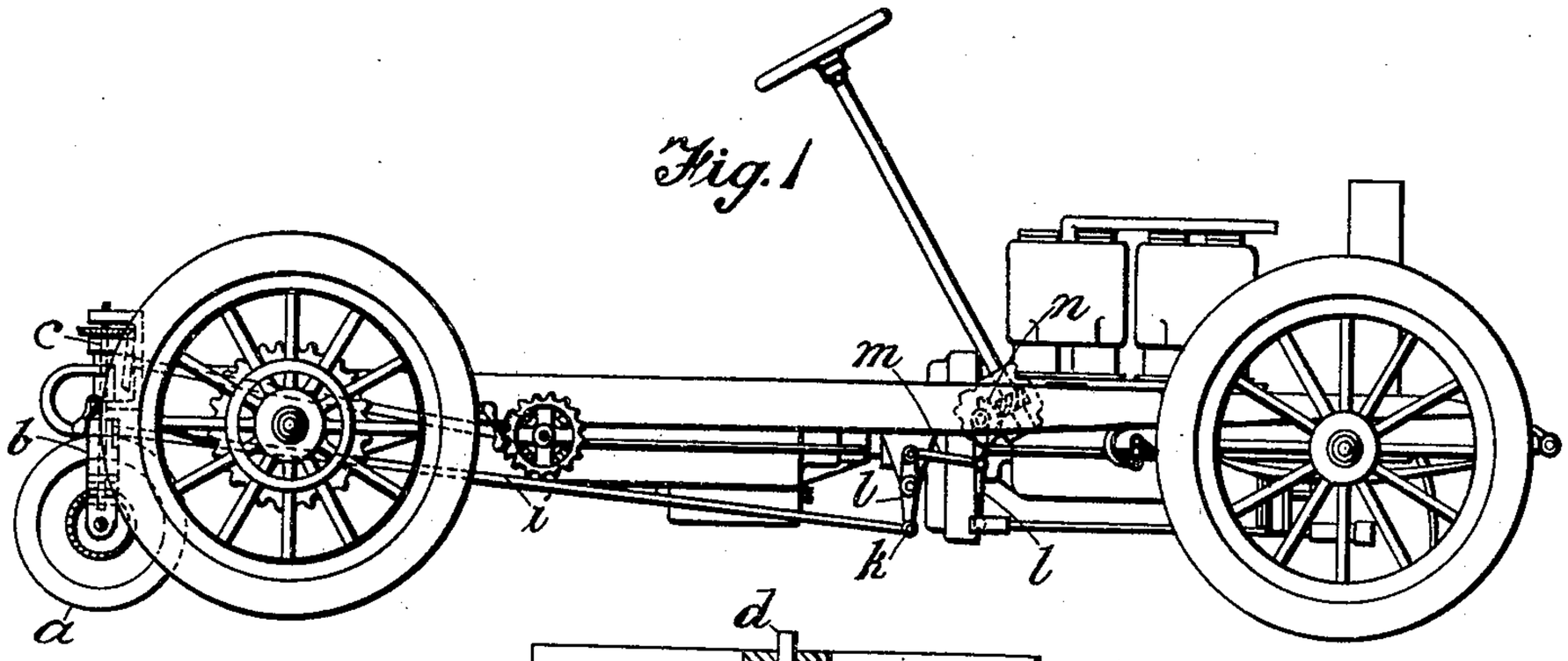


Fig. 3

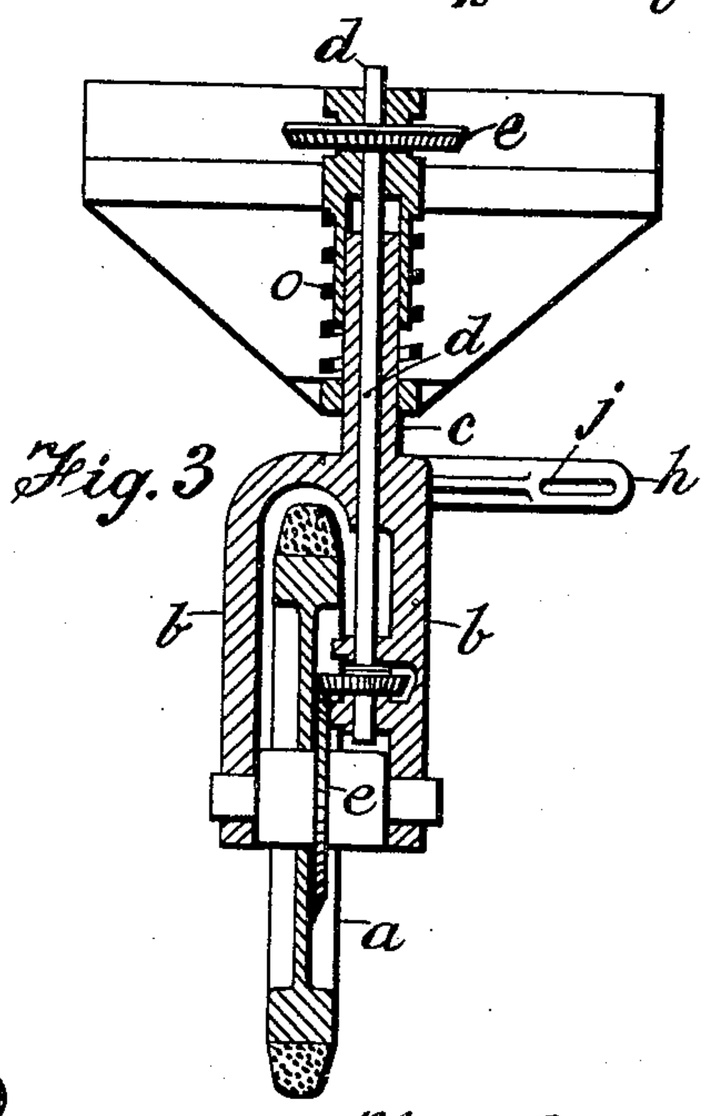
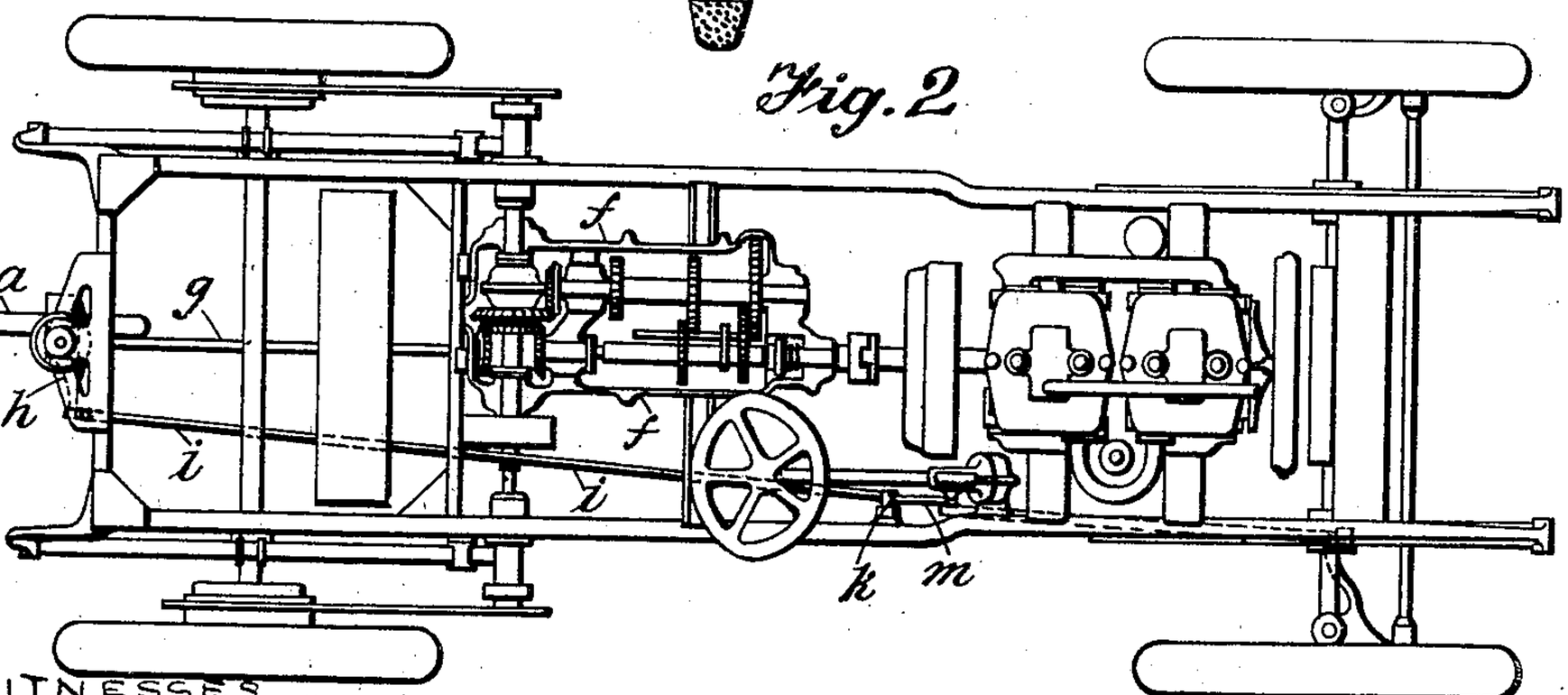


Fig. 2



WITNESSES
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2 SHEETS—SHEET 2.

Fig. 4

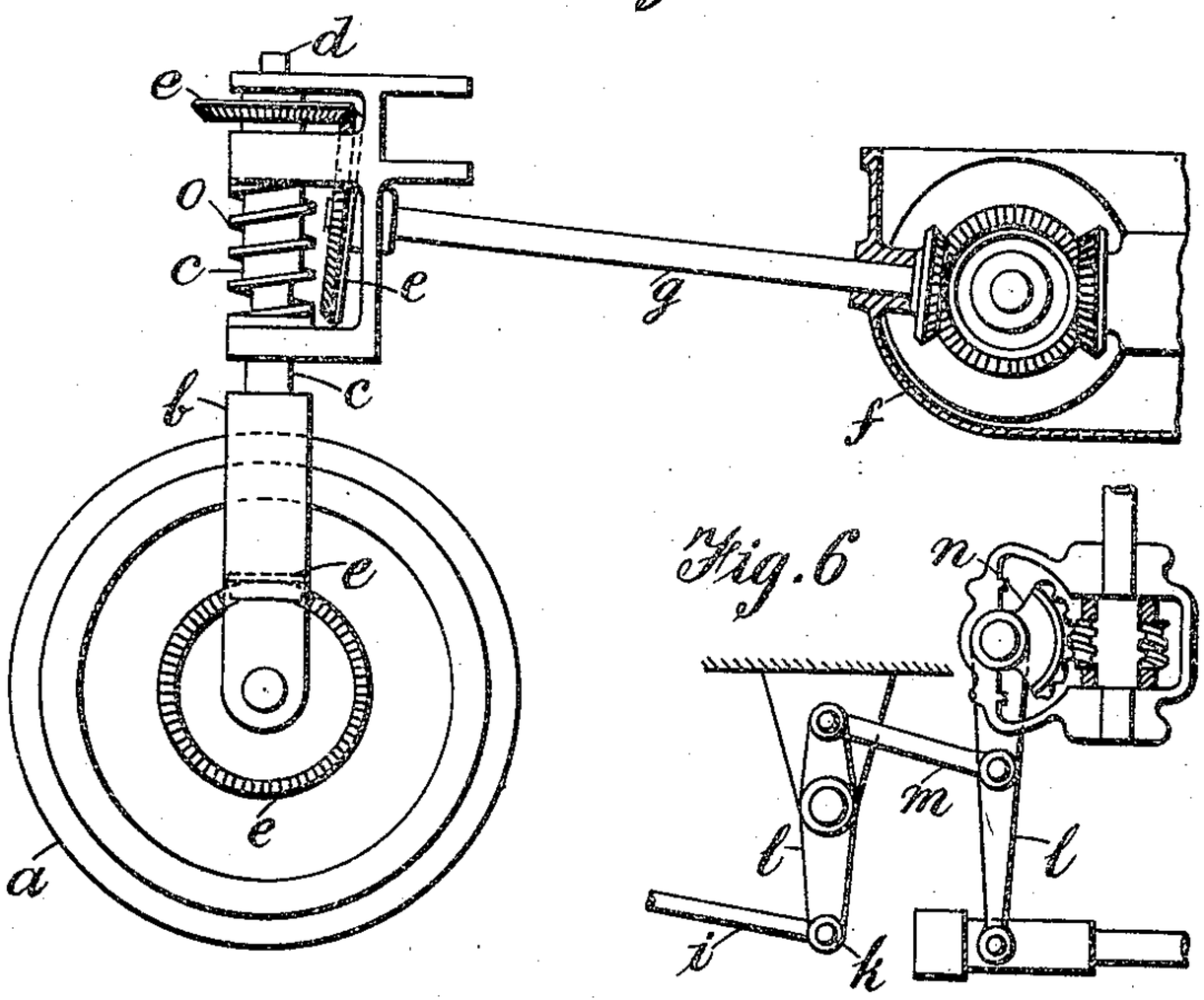
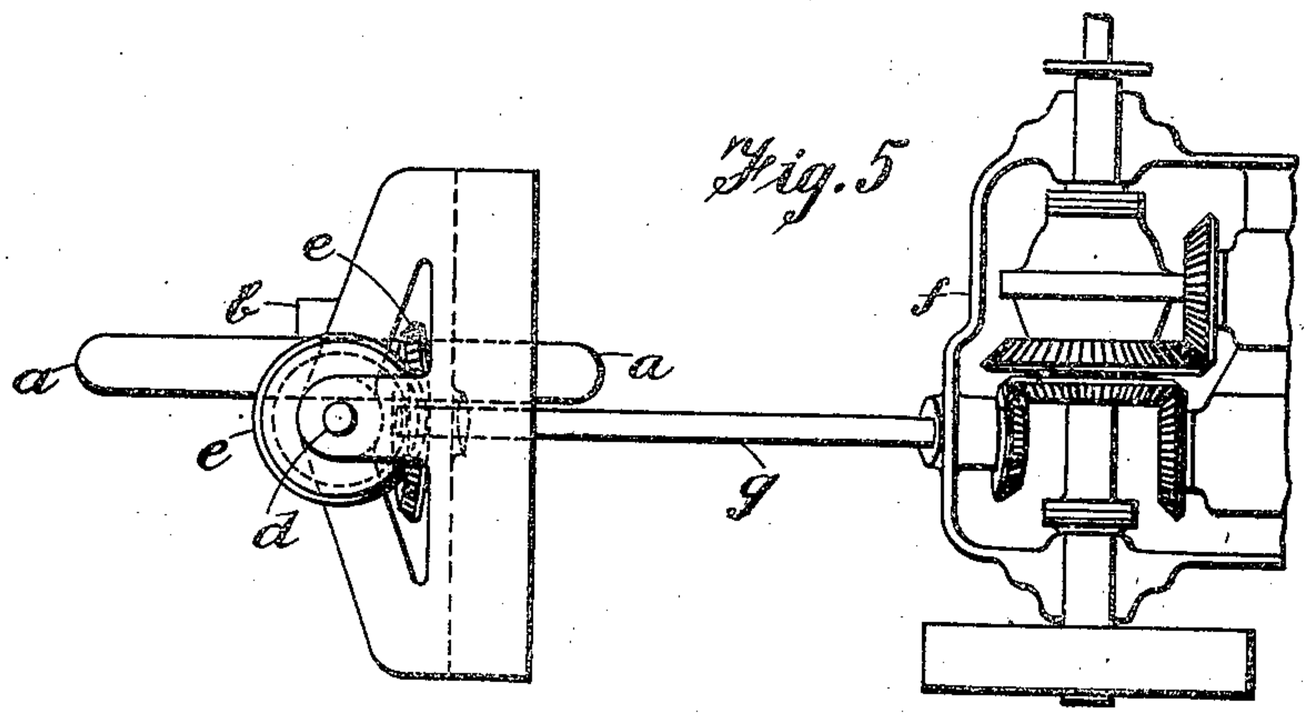


Fig. 6

Fig. 5



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ALBAN SHUTTLEWORTH MOORE, OF LONDON, ENGLAND.

DEVICE FOR PREVENTING SLIPPING OF MOTOR-DRIVEN VEHICLES.

No. 868,208. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed August 17, 1906. Serial No. 331,080.

To all whom it may concern:

Be it known that I, ALBAN SHUTTLEWORTH MOORE, a subject of the King of Great Britain and Ireland, residing at No. 27 Twyford Mansions, Portman Square, in the county of London, England, have invented new and useful Improvements in Devices or Apparatus for Preventing Slipping of Motor-Driven Road-Vehicles, of which the following is a specification.

This invention has reference to a device or apparatus for preventing slipping of motor-driven road vehicles, and has for its object the prevention, or reduction, of the liability of such slipping, arising from a rapid change of direction of motion of the car, consequent upon the operation of the steering mechanism, or from other causes.

According to this invention an additional wheel is provided, situate preferably, approximately equidistant between and slightly behind the rearward, or driving wheels of the car. This wheel may be held by and revolve in the forked arm of a vertical rod, capable of rotary movement in collars or sleeves, formed in, or held by, a bracket secured, it may conveniently be, to the underside of the car. It is driven from the motor, it may be independently of the driving wheels, through a system of spur wheels, chain, and band, or other suitable gearing and is held in close frictional contact with the road surface by means of a spiral or other spring, or weight, which may be adjusted to any required pressure, or may be operated by a lever or otherwise, to increase, reduce, or remove, the frictional pressure as required. The additional wheel is coupled up to and is operated by the steering mechanism, so that it will be caused to change, to any required extent, the direction of its motion, simultaneously with and corresponding to, that of the steering wheel, or wheels, of the car.

It will be obvious that apparatus suitable for coupling the additional wheel to the steering mechanism and also for communicating motion thereto from the motor, may be variously constructed without departing from my invention. One suitable form is shown in the accompanying drawings, in which:

Figure 1, is a side elevation, and Fig. 2 a plan; the apparatus being shown as applied to the chassis of a car. Fig. 3, is a rear view, to an enlarged scale, of the additional wheel and of a convenient arrangement of supporting and operating mechanism therefor. Figs. 4 and 5 are a side elevation and plan respectively (also to an enlarged scale) of the additional wheel and means for communicating power from the motor thereto independently of the driving wheels of the car. Fig. 6 is a view (to an enlarged scale) of the steering actuating mechanism.

a is the additional wheel, which is shown in the position I have found most efficient in counteracting side slip of the rearward or driving wheels of the car. It is supported in the forked arm *b* of the vertical rod *c* and has motive power communicated to it through the rod *d* and gear wheels *e*, which are coupled to the gear box *f* by the rod *g*.

h is a slotted arm connected to, and extending from one side of the forked arm *b*.

i is a rod one end of which is capable of adjustment in the slot *j* of the arm *h;* its other end *k* is connected through levers *l—l* and link *m*, to the steering quadrant *n*.

Change in the line or direction of travel of the additional wheel *a* in relation to that of the steering wheel, or wheels, may be varied according to the position the end of the rod *i* is caused to occupy in the slot *j*, which position may be altered as desired, either by a lever operated by the driver, or from time to time by the adjustment of the position on the slot of a screw nut on the end of the rod *i*.

o is a spring surrounding the vertical rod *c* for maintaining the additional wheel in frictional contact with the road surface.

I have shown the invention applied to a chassis fitted with the well known Ackerman steering gear, but it will be obvious that it is capable of adaptation to any other system of steering.

By the construction of apparatus as described it will be seen that when the steering wheels are rapidly turned, in either direction, from their line of travel, any tendency of the rearward wheels to slip in the opposite direction, will be counteracted, more or less, according to the angle of the additional wheel and its retroactive power on the road surface, such power being always exerted in a line approximately coincident with the direction of travel of the steering wheels.

What I claim as of my invention and desire to secure by Letters Patent is:

1. Apparatus for preventing side slipping or skidding of motor-driven road vehicles, wherein an additional rearward wheel, driven from a motor, is coupled to and operated by, the steering mechanism, so that it will be caused to change to any required extent, the direction of its motion and gripping power on the road surface, simultaneously with, and approximately corresponding to the direction of travel of the steering wheel, or wheels, of the car.

2. In combination with a vehicle and its driving motor and steering device, of an additional wheel, means for driving the same, a support for the wheel, and means for connecting said support with the steering device so that said support and wheel will be moved simultaneously with and traveling approximately in the same direction as the steering wheels.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ALBAN SHUTTLEWORTH MOORE.

Witnesses:
JAMES G. STOKES,
C. CHIRON.