

C. C. MERRIMAN.

Road Engine.

No. 95,032.

Patented Sep. 21, 1869.

Fig. 2

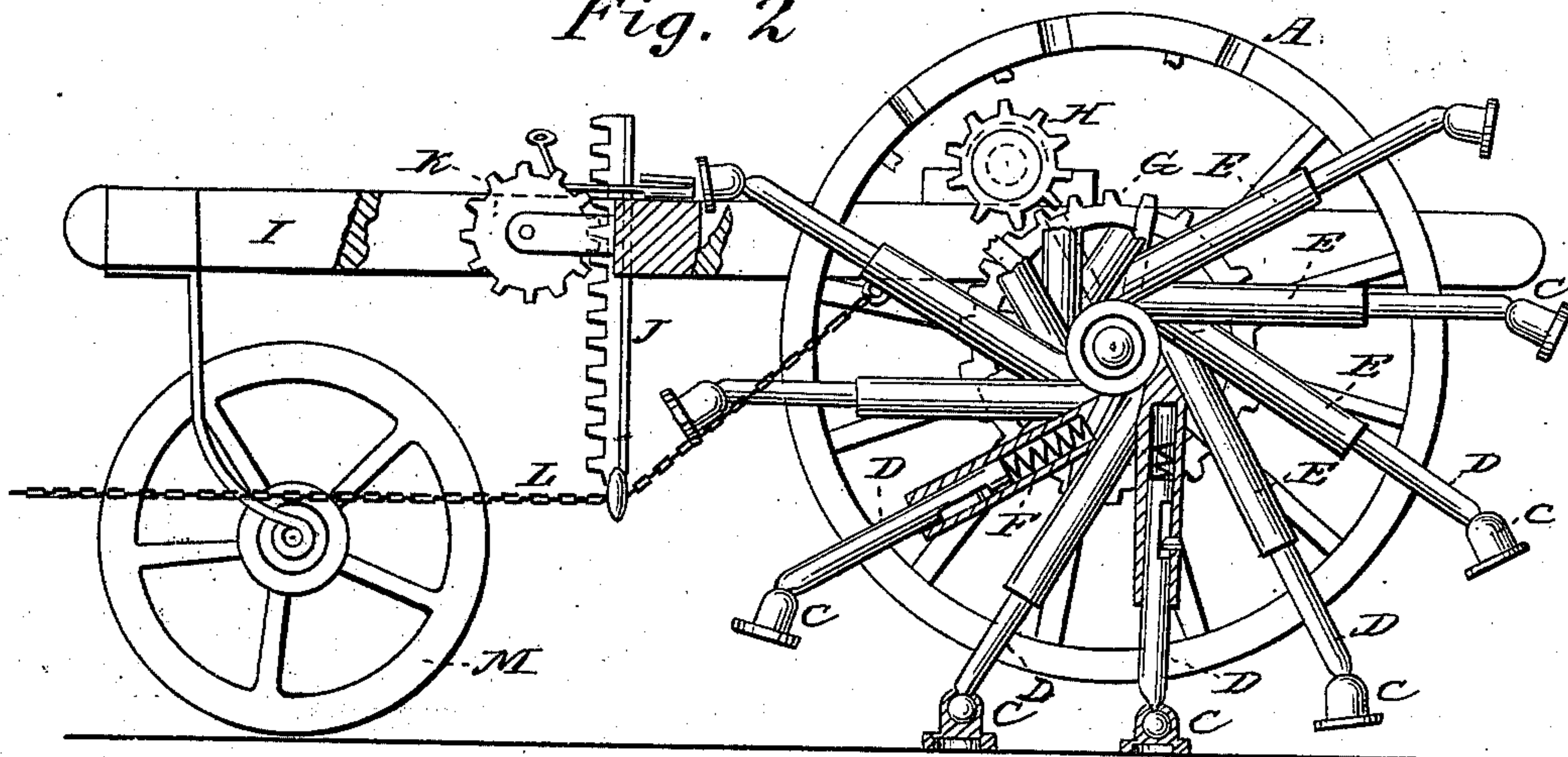
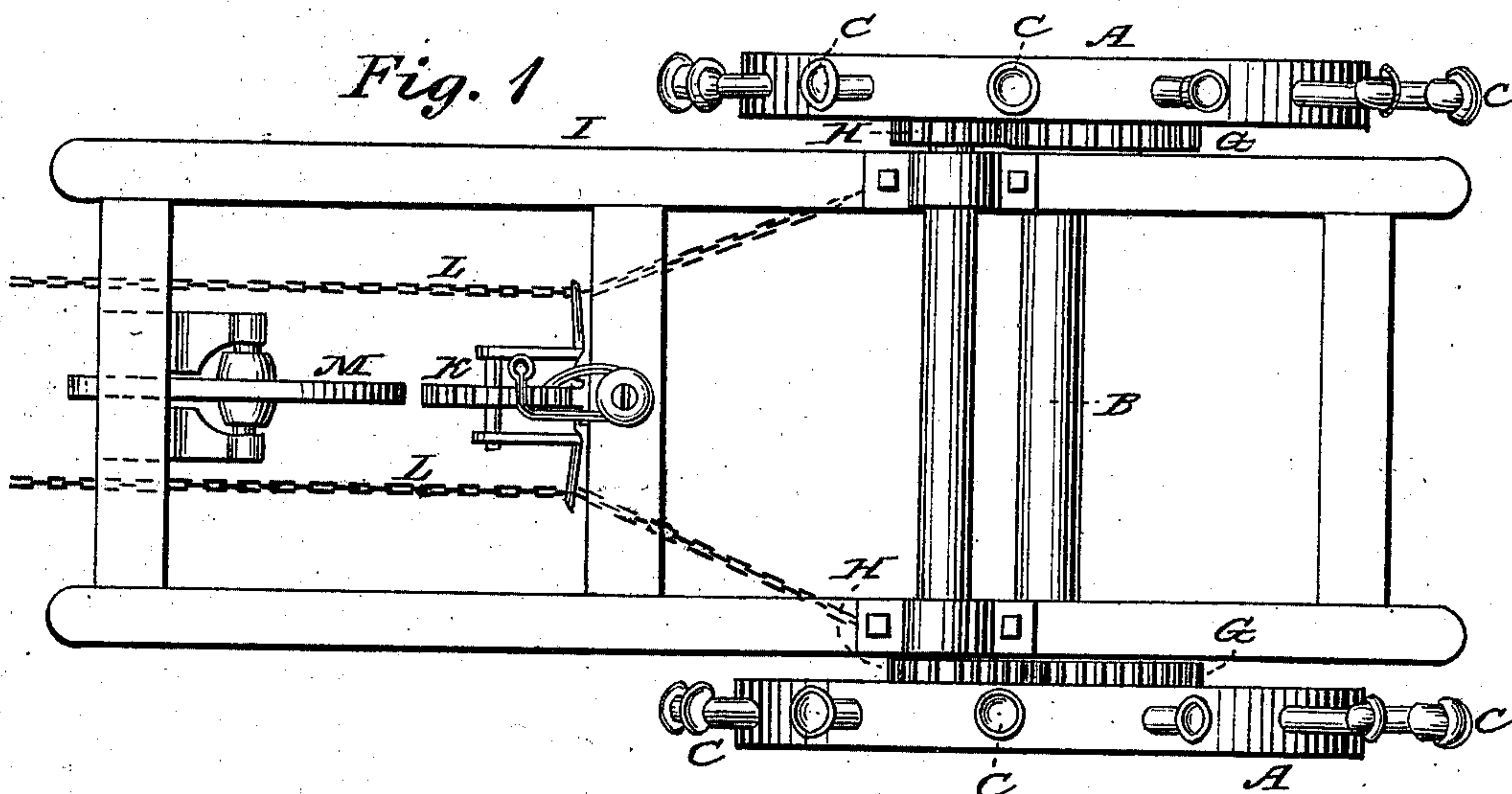


Fig. 1



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# United States Patent Office.

C. C. MERRIMAN, OF BRIGHTON, NEW YORK.

Letters Patent No. 95,032, dated September 21, 1869.

## IMPROVEMENT IN TRACTION-ENGINES.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern :

Be it known that I, C. C. MERRIMAN, of Brighton, in the county of Monroe, and State of New York, have invented a new and useful Improvement in Traction-Engines ; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in traction-engines ; and

It consists in producing the traction by feet secured to revolving wheels in such a manner that they shall conform to and press upon the surface of the ground over which they pass, such wheels and feet being actuated by a steam-engine or other motive-power by means of gear-wheels, and in such a manner that the traction may be increased or diminished by the line of draught, as will be hereafter more fully described.

Figure 1 represents a plan view of a carriage, provided with my traction-wheels.

Figure 2 is a side view, partly sectioned, showing the position of the feet on the wheels, with the tubes in which the arms work, two of which tubes are broken away to show the spiral spring by which the feet are forced outward.

Similar letters of reference indicate corresponding parts.

A is the driving-wheel.

B represents the shaft.

C represents the feet.

D, the arms to which the feet are attached.

E represents the tubes which enclose spiral springs, which tend to force the arms and feet outward.

F represents the spiral springs.

G is an internal gear-wheel, secured to the driving-wheel A.

H is the driving pinion-wheel, to which the power is imparted from the engine by any suitable mechanical device.

I is the frame of the carriage.

J is a vertical rack attached to the frame, which is raised or lowered by the pinion *k*, for altering the line of draught by depressing the draught-chain L, or allowing it to rise.

M is a supporting and guide-wheel at the rear of the carriage.

By depressing the chain, as seen in the drawing, the weight of the rear part of the engine will be thrown upon the driving-wheels in proportion to the strain or draught, thereby bringing more of the weight upon the feet and increasing the traction.

The springs pressing the arms outward should be of such strength as not to give much under the simple weight of the engine without draught.

The feet, by their arms, may be so placed that they work a little forward of the centre of the wheel, as seen in the drawing, and they may also be hinged or jointed to the arms a little forward of their centre, so that the greater pressure may come upon the front or toe-cork of the shoe, thereby imitating the position of the feet of draught-animals when drawing heavy loads.

The feet may be constructed in any suitable form or shape to conform to the surface and irregularities of the ground or road, or they may preferably be made to resemble the hoofs or feet of horses with the shoes on. They may be of any suitable material, and hinged or jointed to the arms by any of the well-known devices for that purpose, or arranged so as to operate in any effective manner in combination with the driving-wheel or wheels.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The feet, as described, when arranged in any manner to operate in combination with one or more driving-wheels, for the purpose of producing traction.

2. The feet C, when combined with the wheel A, and actuated by any kind of a spring or elastic material, substantially as specified.

3. The method of increasing or diminishing the traction by altering the line of draught, substantially as described.

4. The arrangement of the draught-chain L, relatively to the rear end of the engine, for increasing the pressure on the driving-wheels, substantially as specified.

Witnesses:

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