

G. ROGERS.
TRACTION WHEEL.

No. 173,498.

Patented Feb. 15, 1876.

Fig. 1.

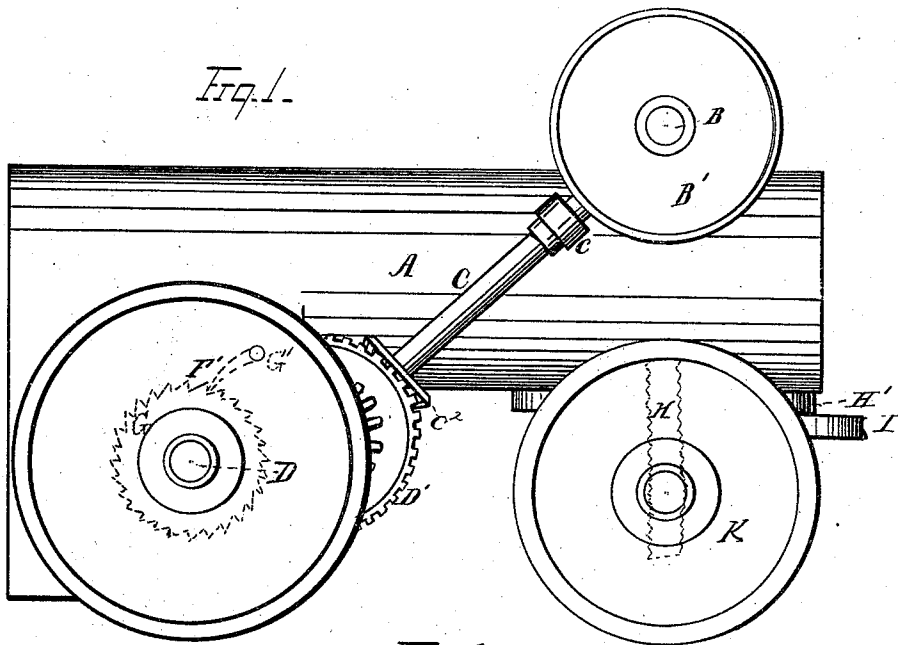
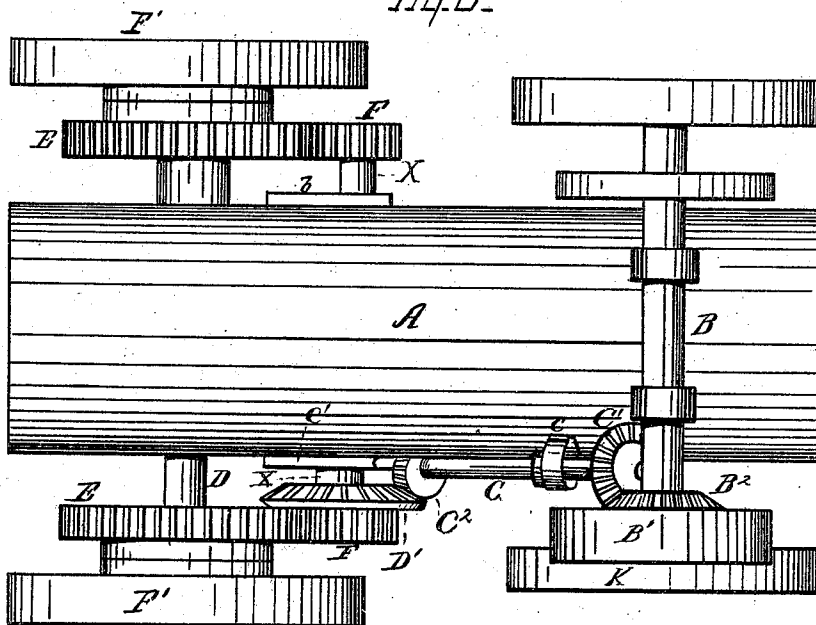


Fig. 2.



WITNESSES
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GEORGE ROGERS, OF MOUNT VERNON, OHIO.

IMPROVEMENT IN TRACTION-WHEELS.

Specification forming part of Letters Patent No. **173,498**, dated February 15, 1876; application filed October 6, 1875.

To all whom it may concern :

Be it known that I, GEORGE ROGERS, of Mount Vernon, in the county of Knox and State of Ohio, have invented certain new and useful Improvements in Traction-Engines; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification :

My invention relates to an improvement in traction-engines.

In the drawings Figure 1 is a side-elevation of a traction-engine, embodying my invention; Fig. 2 is a plan-view of same.

My invention consists in the following parts and combinations, as hereinafter specified and claimed, wherein A is the boiler of the engine; B, the driving-shaft to which the power is directly applied from the cylinder. Upon the shaft B is fixed a balance or fly wheel, B¹, which may also serve the purpose of a primary pulley, if desired, for operating any machinery. Upon the shaft B is also rigidly fixed a bevel-gear wheel, B², which engages with a bevel-pinion, C¹. The pinion C¹ is rigidly fixed to one extremity of the shaft C, the said shaft C revolving in journals c c', attached to the boiler A. Upon the lower extremity of the shaft C is provided a beveled gear-wheel, C², which engages with a beveled-pinion, D', by which means the shaft D is revolved. At each extremity of the shaft D is provided gear-wheels E, which engage with, and are operated by, the cog wheels F, which are rigidly secured to an axle, x, which revolves in journals e' b; on the under part of the boiler.

Any suitable arrangement, such as pawl and ratchet, G G', applied respectively to the wheels and axles, admits of the independent movement or revolution of the truck-wheels F'; as, for instance, in turning to the right or left. H is a screw passing from the boiler down through the front-axle of the truck, answering the purpose not only of a king-bolt, but also of a lifting-jack, by means of the nut-wheel H', by the turning of which, in one direction or the other, the front end of the boiler A will be lifted or lowered from the front axle of the truck in an obvious manner. I is a

tongue or pole for the attachment of horses, oxen, &c., for the purposes not only of assisting in the draft, but likewise of steering and guiding the engine.

The feature of adjusting the elevation of the front end of the boiler by means of the lifting-jack arrangement, herein described, is for the purpose of maintaining, as near as possible, the level position of the boiler in traveling upon an inclined road, so as to insure safety by having the crown-sheet and flues at all times properly covered with water.

The invention herein described is especially adapted to portable engines now in such popular use for farming purposes, and for sawing limited quantities of timber in various places. It has heretofore been found more or less difficult, especially during inclement seasons, to convey the so called portable engines from place to place as desired. This invention is intended to obviate, to a great extent at least, this difficulty and objection; and its character is such as to render it easily adaptable to portable engines already in use, and not provided with any power of self-locomotion.

It has heretofore been found in traction-engines that, in order to accomplish the purpose for which they are intended, so much weight is necessary as to render them impracticable for any popular use. It is not professed in this invention that this objection has been overcome in the machine itself, and, for the purpose of supplying the deficiency in this respect, the tongue or pole has been provided, as herein described, to which may be attached horses or any other draft animal.

What I claim is—

In a traction-engine, the combination with the driving-shaft B and the rear-axle D, said axle adapted to be loosely or rigidly secured to the wheels F F', of the shaft C, bevel-gear wheels B² C¹ C² D', and supplemental shaft, provided with gear-wheels F F, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE ROGERS.

Witnesses:

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