

(No Model.)

E. HOXSIE.
Traction Engine.

No. 237,978.

Patented Feb. 22, 1881.

Fig. 1.

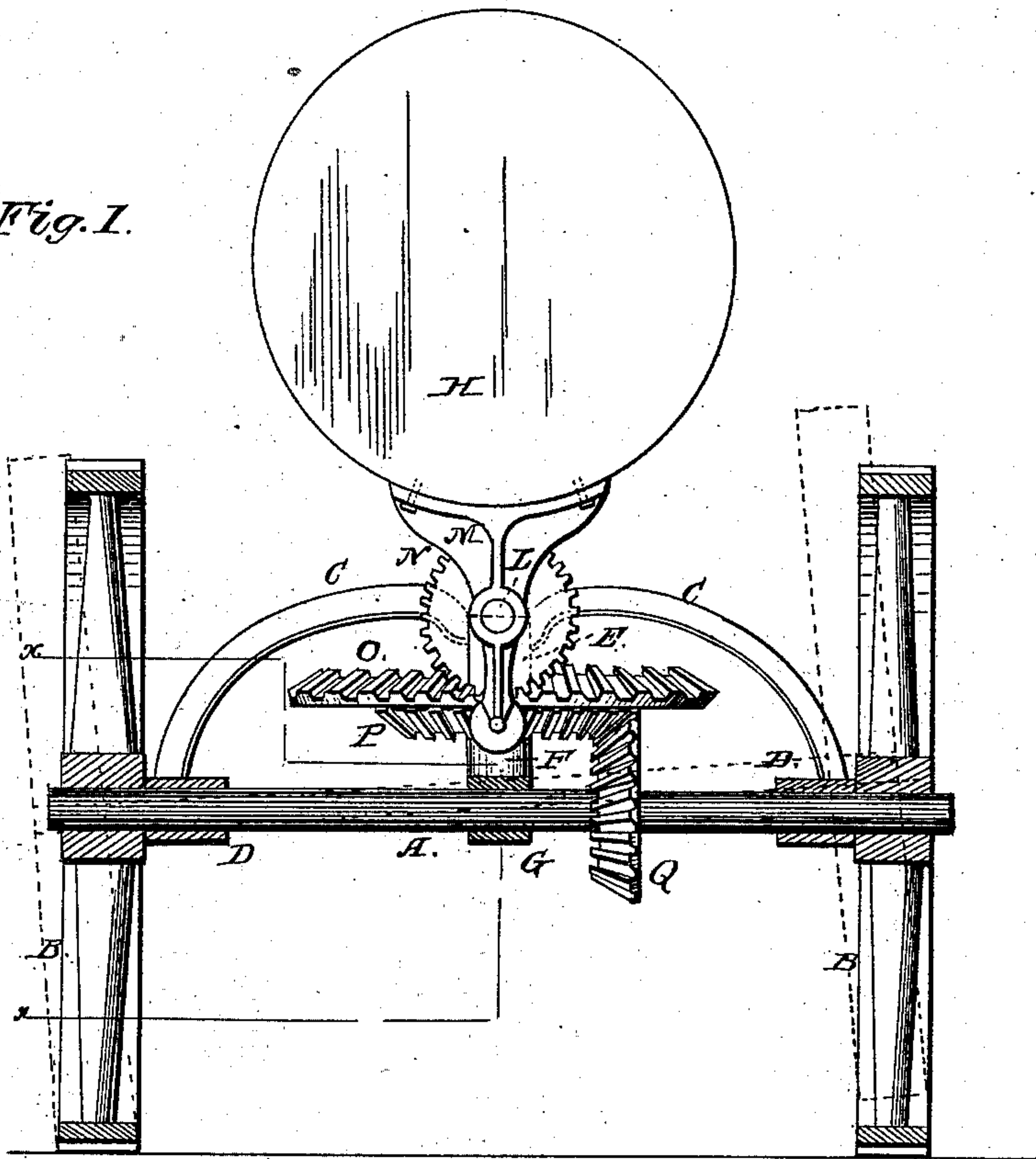
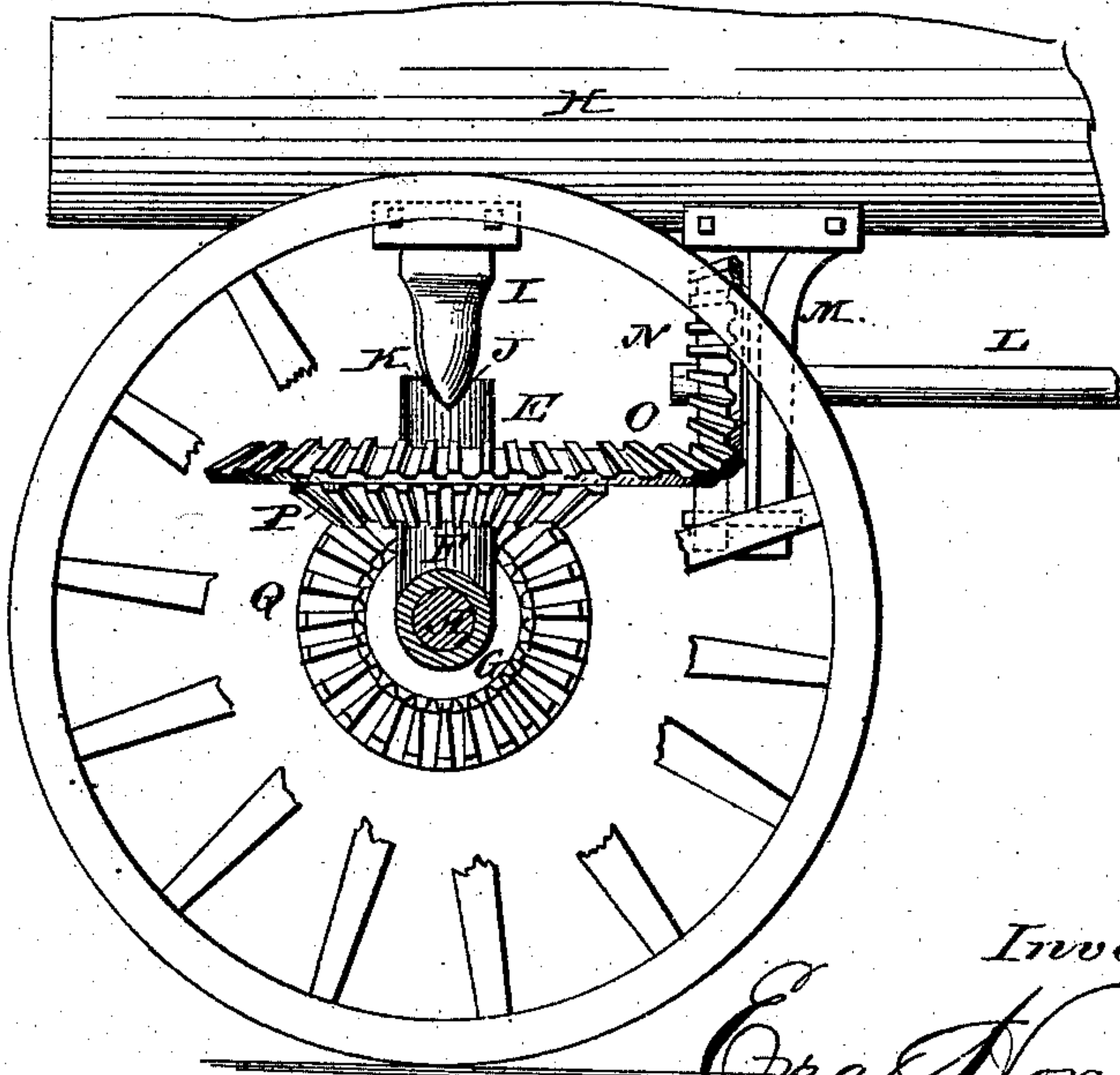


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

EZRA HOXSIE, OF BLISSFIELD, MICHIGAN.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 237,978, dated February 22, 1881.

Application filed December 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, EZRA HOXSIE, of Blissfield, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Traction-Engines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to traction-engines; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described with reference to the drawings hereto annexed, in which—

Figure 1 is a vertical sectional view; and Fig. 2 is a section on the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

My invention has for its object to apply the traction power to the front wheels of the engine, and to mount the boiler upon the latter in such a manner that they may adapt themselves to and pass over any unevenness in the ground or road without disturbing the position of the boiler, and without shaking and injuring or affecting the run of the gear.

To this end it consists in the construction and arrangement of parts, which I shall now proceed more fully to describe.

A in the drawings represents the front axle, upon which the drive-wheels B B are firmly keyed or attached by pawl-and-ratchet joint, so as to revolve with the axle.

C is a frame or yoke provided with boxes or collars D, by which it is mounted upon the axle, which is journaled in the collars D, which latter are placed closely adjoining the wheels. At its top the yoke C is provided with a vertical collar, E, journaled upon a pintle, F, having a horizontal collar, G, by which it is adjusted centrally upon the axle.

The boiler H is provided, near its front end, with a downward-projecting stud, I, terminating in a ball, J, which is mounted in a suitable socket, K, in the upper end of collar E, thus forming a universal joint, which not only permits the axle to turn freely, but also to tilt, as shown in dotted lines, Fig. 1, when any obstruction or unevenness in the road is en-

countered, thus permitting such to be passed without disturbing the position of the boiler.

L is the main drive-shaft, which is arranged longitudinally under the boiler, its front end being journaled in a hanger, M, secured under the latter. At its front end the shaft L carries a pinion, N, engaging a bevel-wheel, O, journaled upon the pintle F below collar E.

Secured to or cast upon the under side of bevel-wheel O is a miter-wheel, P, engaging a corresponding gear-wheel, Q, keyed or otherwise secured upon the axle.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. Through the shaft L and gear N O P Q motion is transmitted from the engine to the front axle, and by that to the traction-wheels, by which the machine is driven.

By my improved method of mounting the boiler and the gear the machine may be driven over rough and uneven roads without injury.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a traction-engine, the combination, with the axle A, having traction-wheels B B, and mechanism for conveying power from the engine to said axle, of the yoke C, connected at its ends to said axle, and provided with a collar, E, having a socket, K, pintle F, having collar G, surrounding said axle, and the boiler H, having a downward-projecting stud, I, terminating in a ball, J, the several parts arranged relatively to each other, substantially as and for the purpose specified.

2. The combination of the axle A, having traction-wheels B B and miter-wheel Q, yoke C, having collars D D E, the latter provided with a socket, K, pintle F, having collar G, boiler H, having ball J, and hanger M, shaft L, and the gear N O P, all arranged and operating substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EZRA HOXSIE.

Witnesses:

H. W. TRACY,
O. F. SHELDON.