(No Model.)

E. HUBER.

TRACTION ENGINE.

No. 565,900. Patented Aug. 18, 1896.

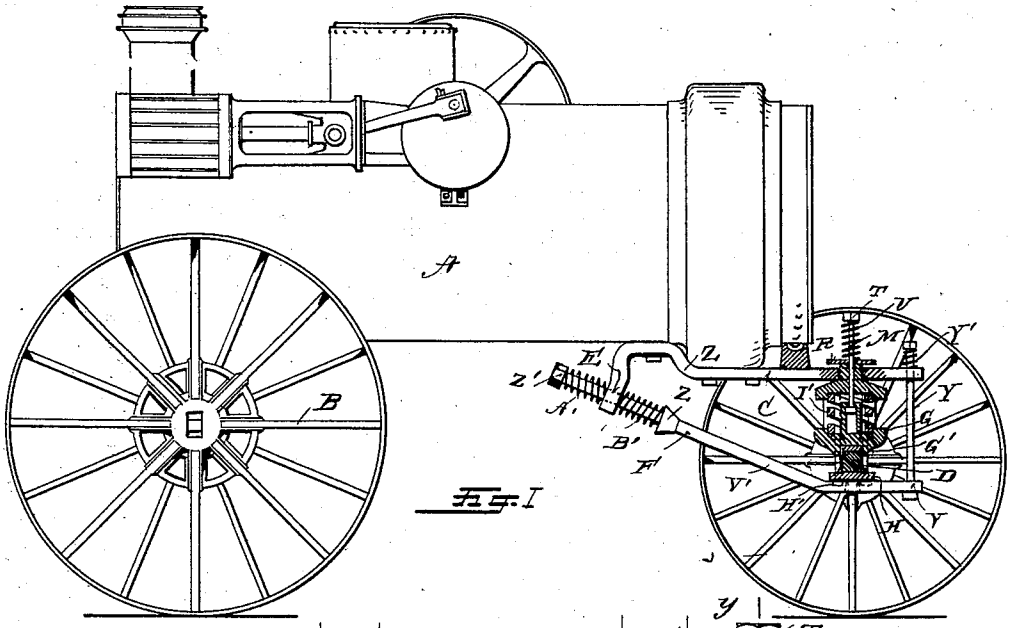

Fig. 1.

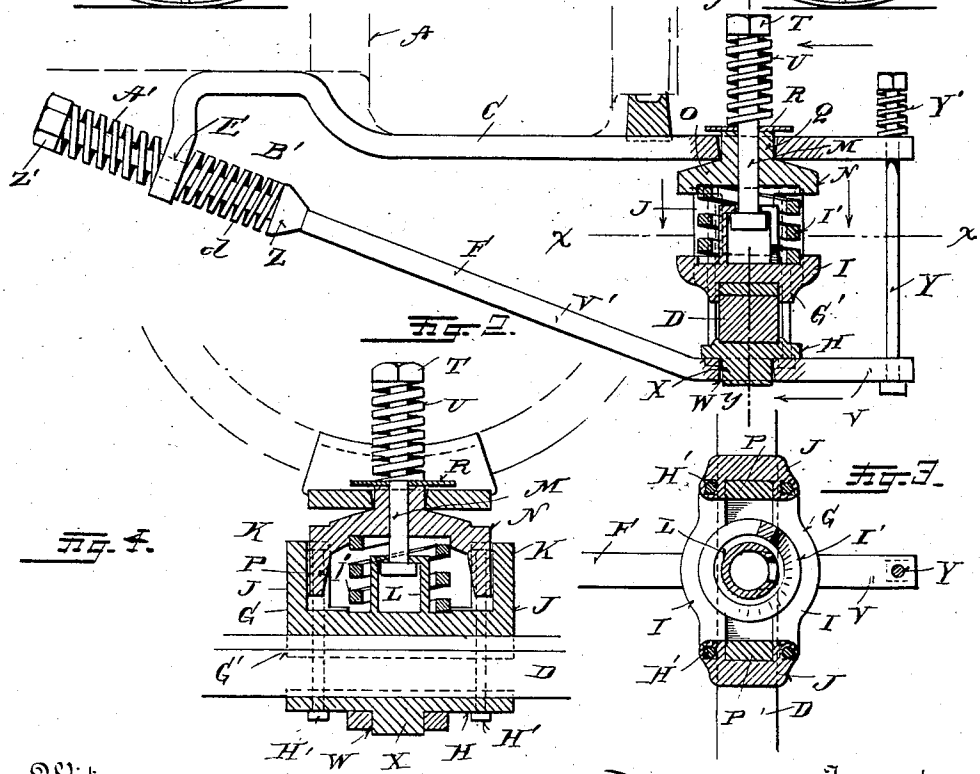

Fig. 2.

Fig. 4.

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD HUBER, OF MARION, OHIO.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 565,900, dated August 18, 1896.

Application filed April 4, 1896. Serial No. 586,201. (No model.)

To all whom it may concern:

Be it known that I, EDWARD HUBER, a citizen of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Traction-Engines, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is to provide means for relieving sudden thrusts on the axle and steering-chains on a traction-engine when passing over rough roads or obstructions in the road.

With this object in view my invention consists in the peculiar construction and arrangement of the various parts, and in the novel combination of the same, all as more fully hereinafter described, and as specifically pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a traction-engine embodying my invention, the supporting mechanism for the forward end of the boiler being shown in section. Fig. 2 is an enlarged detached sectional view of the supporting mechanism; and Figs. 3 and 4 are cross-sections on lines *x x* and *y y*, Fig. 2, respectively.

A represents the ordinary boiler of the engine, supported in the rear by the usual traction-wheels B. Beneath the forward portion of the boiler and fixedly secured to the same is a stationary bar or support C, which bar extends beyond the boiler-front and is secured to the axle D by devices more fully hereinafter described. At its rear the bar projects downwardly, as plainly shown in Fig. 1, the front end of which is apertured at E to allow the reach F to pass therethrough.

The devices for supporting the forward end of the boiler consist, essentially, of two members secured, respectively, to the supporting-bar and forward axle with compensating connecting mechanism interposed. The lower member, which forms the socket of the support, comprises a rectangular frame G, provided with downwardly-projecting side flanges G′, arranged upon the axle D midway between the wheels and secured to the same by means of a bottom plate H and bolts H′, as plainly illustrated in Figs. 2 and 4. The frame consists of two side pieces I, the middle portions of which are curved outwardly to allow for the insertion between the same, and to conform to the shape of, a spiral spring I′, and two cross or end pieces J, which, together with a bottom plate, complete the socket. Upon the end portions are extensions or uprights K, as shown in Fig. 4, while the sides I are slightly raised to retain the spring in position. Arranged in the center of the socket and integral with the same is a hollow cylindrical standard L, the top of which is apertured to receive a pin M.

The upper member of the support N comprises the apertured body portion O, provided with downward extensions or arms P and side extensions corresponding to the lower member. Upon the upper portion of the body and integral therewith is located an apertured neck Q, adapted to extend up and through the support C. R is an annular flange upon said neck. A headed pin M passes through the cylindrical standard, the head of which engages with the apertured head of the standard, and extends upwardly through the member N, the upper end of which is provided with a nut T. U is a spiral spring interposed between the nut and the annular flange R.

The fifth-wheel reach F comprises a horizontal portion V and an upward inclined portion V′. The horizontal portion of the reach is slotted at W to engage over a lug X, projecting from the bottom of the plate H, while the free end of said portion is connected to the stationary support C by means of rod Y. Y′ is a spiral spring interposed between a nut on the free end of the bolt and the support. Upon the portion V′ of the reach and near the end thereof is located a shoulder or collar Z. The free end of the inclined portion extends through the aperture E in the stationary support and is provided at its end with a head Z′. Arranged between the support E and the head Z′ and collar Z, respectively, are spiral springs A′ and B′.

It will be seen by this novel construction that the two members of the support are secured by flexible connecting devices. The member N is adapted to rest upon the spring I′, and is guided in its vertical movements by the downward projections P, engaging within the extensions K of the socket. The lower

member is kept constantly in contact with the upper by means of the pin M and spiral spring U. The aperture in the stationary support, through which the neck Q passes, is beveled to allow for lateral movements of the neck. These flexible connections, together with the springs on the reach, which are adapted to abut against the support E, will greatly relieve any sudden jolts or thrusts which ensue from the engine traveling over rough roads.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a traction-engine, the combination with the boiler, a single support thereon, a wheeled axle, connecting mechanism between the axle and forward portion of the boiler-support, a reach adapted to engage with the connecting mechanism and the rear of the support, and yielding means for receiving the end thrusts of the reach, substantially as described.

2. In a traction-engine, the combination with the boiler, a single support thereon, a wheeled axle, connecting mechanism between the axle and forward portion of the boiler-support, a reach pivoted beneath the connecting mechanism, the terminals of which are connected to the free ends of the support, and yielding devices for receiving the end thrusts of the reach, substantially as described.

3. In a traction-engine, the combination with the boiler, of a support thereon, the wheeled axle, connecting mechanism between the axle and boiler-support, a reach pivotally secured to the connecting mechanism, the rear end of which is adapted to slidingly engage with the rear of the support, a connecting-bar between the forward ends of the reach and support, the spring Y′, and yielding means for receiving the rear end thrusts of the reach, substantially as described.

4. In a traction-engine, the combination with the boiler, a single support thereon, the wheeled axle, connecting mechanism between the axle and forward portion of the boiler-support, a reach pivotally secured to the connecting mechanism beneath the axle, the rear of which is adapted to slidingly engage with the rear of the support, connections between the forward ends of the reach and support, a stop or stops on the reach, and one or more springs arranged on the reach between the stops and supports, substantially as and for the purpose described.

5. In a traction-engine, the combination with the boiler and the front axle and a reach-bar extending from a point in front of said axle to the rear thereof, of three connections as follows, one over the axle and between it and the boiler structure, one between the boiler structure and the reach forward of the axle, and one between the boiler structure and the reach in the rear of the axle, and a spring or springs for each of said three connections, those of said two forward connections acting vertically on the parts, one over and the other in front of the axle, and those of said rear connection acting in opposite directions and in line with the end thrusts of the reach, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD HUBER.

Witnesses:
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