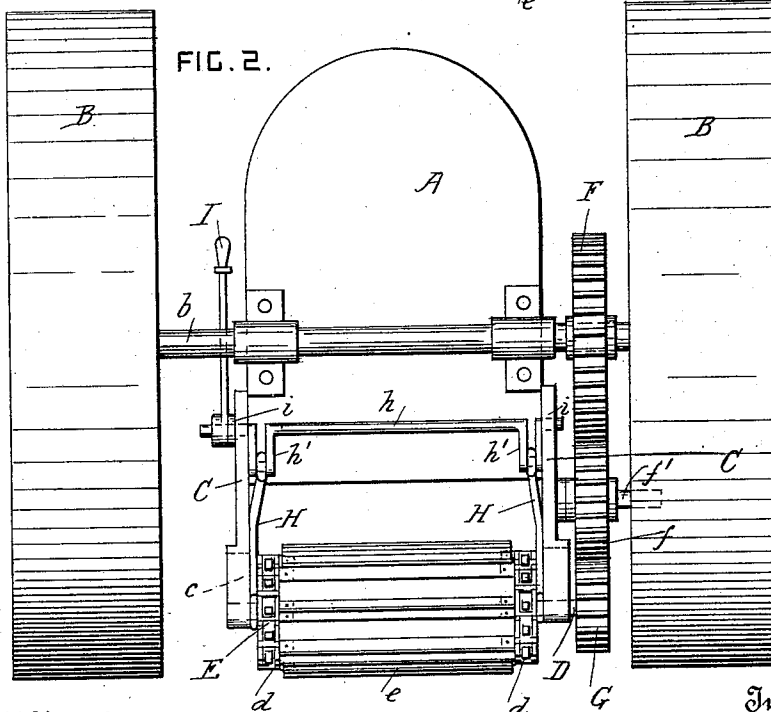
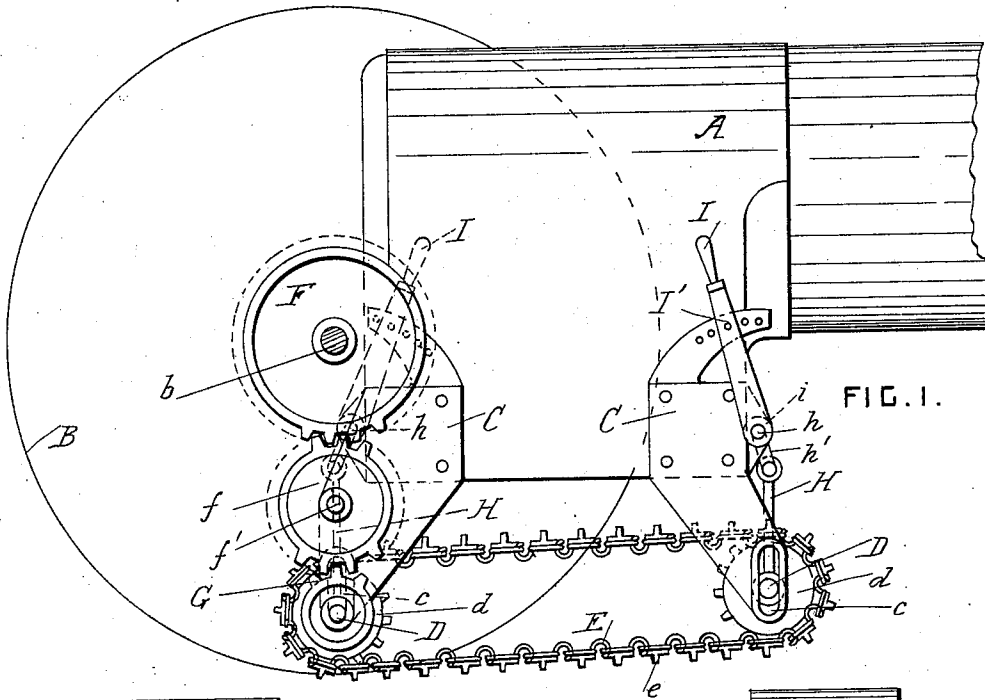


(No Model.)

A. E. PRICE.
TRACTION ENGINE.

No. 576,764.

Patented Feb. 9, 1897.



Witnesses
J. Spragg Toole
John C. Johnson.

Inventor
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UNITED STATES PATENT OFFICE.

ABRAHAM E. PRICE, OF WAYNESBOROUGH, PENNSYLVANIA, ASSIGNOR TO
THE GEISER MANUFACTURING COMPANY, OF SAME PLACE.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 576,764, dated February 9, 1897.

Application filed July 8, 1896. Serial No. 598,369. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM E. PRICE, a citizen of the United States, residing at Waynesborough, in the county of Franklin and State of Pennsylvania, 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 appertains to make and use the same.

This invention relates to traction-engines; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a side view of portions of a traction-engine, showing the present invention; and Fig. 2 is an end view of the same.

A is the boiler, which is of any approved construction.

B are the road-wheels, which are mounted upon the rear axle *b*. Rotary motion is imparted to one or to both of the road-wheels by a motor and intermediate driving mechanism of approved construction, which are not shown in the drawings, as they do not form a part of the present invention. The rear axle *b* is supported in any approved manner and the road-wheels are of any approved construction.

In using traction-engines upon soft ground, as when used to draw along a gang-plow in plowing by steam, some difficulty is occasionally met with by reason of the road-wheels sinking more deeply into the ground than is desirable. In order to overcome this difficulty and to obviate the necessity of making the road-wheels of greater width than is desirable, an auxiliary support is provided between the road-wheels for taking a part of the weight without retarding the motion of the traction-engine.

C are brackets secured to the boiler or to any equivalent part of the frame of the traction-engine. These brackets are provided with vertical slots *c* in their lower parts. D are cross-shafts carried in the said slots, and *d* are chain-wheels mounted on the said shafts.

E are drive-chains of approved construction, passing over the chain-wheels *d*, and *e*

are cross-bars secured to the said drive-chains or flexible connections. The cross-bars extend transversely between the chains and are preferably T-shaped in cross-section.

The rear chain-wheels *d* are driven by any approved driving mechanism proportioned so as to move the lower cross-bars at substantially the same speed as the peripheries of the road-wheels and in the same direction.

F is a toothed wheel secured on the rear axle when the said rear axle is revoluble, and *f* is a toothed idle-wheel gearing into the wheel F and journaled on a pin *f'*, projecting from one of the brackets C.

G is a toothed wheel secured on the rear cross-shaft and gearing into the idle-wheel *f*. The idle-wheel *f* is slidable on its pin, so that it can be placed out of gear with the wheels F and G. As this auxiliary support is not always required in action, and also in order that its position may be varied, it is made adjustable in a vertical direction.

H are links pivoted to the cross-shafts D, and *h* are crank-shafts provided with cranks *h'* and journaled in bearings *i*, secured to the boiler. The upper ends of the links H are pivoted to the cranks *h'*. I are hand-levers secured to the crank-shafts for raising and lowering the cross-shafts D.

I' are pins for securing the levers to the brackets after the position of the auxiliary support has been adjusted.

The front chain-wheels are preferably raised a little higher than the rear chain-wheels, so that the cross-bars engage gradually with the ground. The auxiliary support prevents the road-wheels from sinking unduly, and it also assists in propelling the engine.

The devices for raising and lowering the auxiliary support may be constructed in many different ways in carrying out this invention, and the rear end of the auxiliary support may be extended rearwardly of the rear axle, if desired, so that the toothed wheels do not come vertically one above the other.

What I claim is—

1. In a traction-engine, the combination, with a straight axle, and traction road-wheels on the ends thereof; of a revoluble support arranged under the said axle and between

the said road-wheels, and means for revolving the said support from the said axle, substantially as set forth.

2. In a traction-engine, the combination, 5
with the road-wheels, and their axle; of a revoluble auxiliary support bearing upon the ground between the road-wheels, and toothed driving devices positively connecting the said support with the said axle, substantially as 10
set forth.

3. In a traction-engine, the combination, with the road-wheels; of an auxiliary support comprising cross-shafts, chain-wheels carried 15
by the said cross-shafts, endless flexible connections carried by the chain-wheels, and cross-bars carried by the said connections and engaging with the ground; and driving mechanism operating to move the said cross-bars at substantially the same speed as the periph- 20
eries of the road-wheels, substantially as set forth.

4. In a traction-engine, the combination, with the road-wheels, of an auxiliary support for bearing continuously against the ground,

driving mechanism operating the said sup- 25
port at substantially the same speed as the road-wheels, and means for disengaging the said support from operative connection with the road-wheels, substantially as set forth.

5. In a traction-engine, the combination, 30
with the road-wheels; of brackets provided with vertical slots, cross-shafts mounted in the said slots, chain-wheels carried by the said cross-shafts, endless flexible connections carried by the chain-wheels, and cross-bars 35
carried by the said connections and engaging with the ground; driving mechanism operating to move the said cross-bars at substantially the same speed as the peripheries of the road-wheels; and lever mechanism for rais- 40
ing and lowering the said cross-shafts, substantially as set forth.

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

ABRAHAM E. PRICE.

Witnesses:

CAL KROME,

ALF. N. RUSSELL.