

(No Model.)

G. E. TRAVIS.
BELT TIGHTENER.

No. 581,793.

Patented May 4, 1897.

Fig. 1.

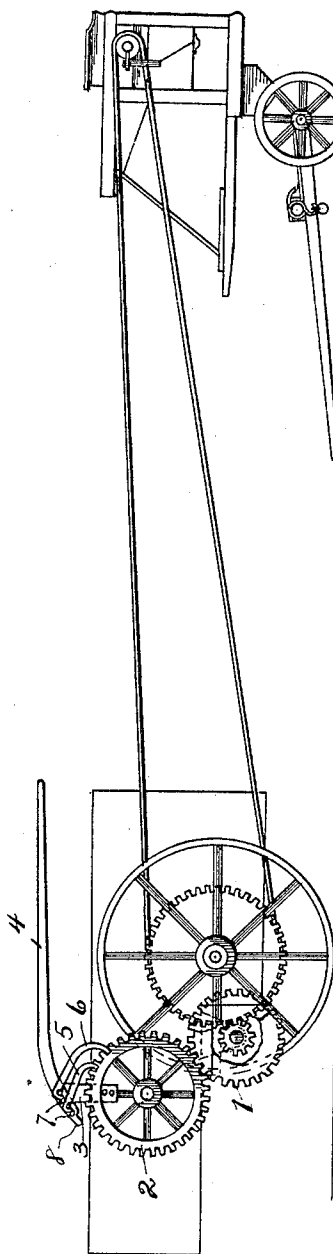
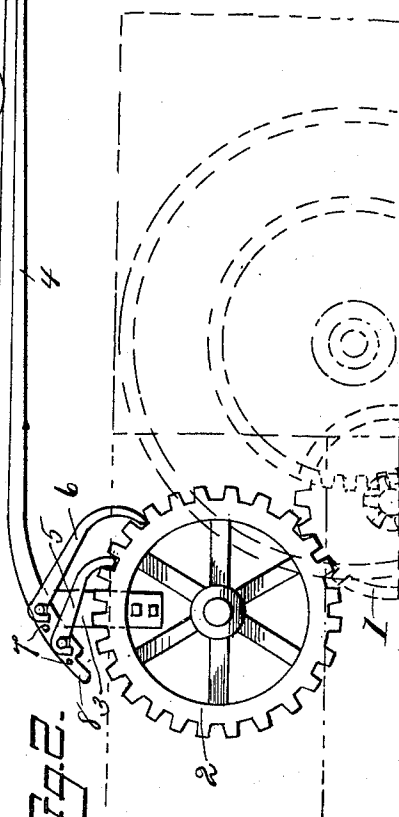


Fig. 2.



Witnesses.
Albert Popkine.
H. Joseph Doyle.

Inventor
George E. Travis.
By *W. B. Ruff*
Attorney

UNITED STATES PATENT OFFICE.

GEORGE E. TRAVIS, OF MOUNT PALATINE, ILLINOIS.

BELT-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 581,793, dated May 4, 1897.

Application filed June 5, 1896. Serial No. 594,425. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. TRAVIS, a citizen of the United States, residing at Mount Palatine, in the county of Putnam and State of Illinois, have invented certain new and useful Improvements in Belt-Tighteners; 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.

My invention relates to means for moving traction-engines for the purpose of tightening the belts connecting them with threshing-machines, separators, and other machinery driven thereby.

As is well known to those familiar with threshing and other machines operated by portable engines, the belt connecting the same by which the machine is driven soon becomes loose and sags, so as not to properly perform its work.

The object of my invention is to provide improved means whereby the engine may be moved a slight distance away from the machine, so as to take up the slack of the belt and thus tighten the same without stopping the operation of the engine or machine.

The invention consists, essentially, in the combination, with a cogged idler-wheel journaled to the engine boiler or frame and meshing with a cog-wheel by which the engine is propelled, of a lever fulcrumed to some stationary part of the engine, boiler, or frame provided with a dog pivoted thereto and a pawl for holding the idler against backward movement.

It also consists in certain minor details of construction and combinations of parts which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a portable engine with my improvements applied thereto, showing the engine connected by a belt with a threshing or other machine. Fig. 2 is an elevation on an enlarged scale showing my improvements.

In the said drawings, the reference-numeral 1 designates a cog-wheel adapted to be driven by the engine for driving the wheels by which the engine is propelled.

I will here say that my invention is appli-

cable to any traction-engine which is propelled by cog-gearing, and that the location of said gearing is immaterial.

Journalled to the boiler of the engine is an idler cog-wheel 2, which meshes with the cog-wheel 1. Secured to the boiler is a bracket 3, to which is fulcrumed, near one end, a lever 4, having pivoted thereto a gravity-dog 5, which engages with said idler. This dog moves with the lever when the latter is oscillated. Pivoted to the fulcrum of the lever is a pawl 6, also adapted to engage with said idler to prevent backward movement thereof, but which is not connected with the lever and therefore does not move with it. The upper ends of the said dog and pawl are curved or rounded and are formed with slots, (see Fig. 2,) with which engage the pivots thereof. The object of this construction is to enable the dog and pawl to be readily slipped off the pivots when not desired to use the same. Pins 7, secured to the lever, are provided for the purpose of holding the dog and pawl in place. At its outer end the lever is provided with a finger 8, adapted to engage with the idler-wheel, so as to relieve the pawl from the pressure thereof when it is desired to remove the pawl, as hereinafter described.

The operation is as follows: When the engine is being propelled, the dog and pawl are removed from the lever and the idler will be free to move or rotate, so as not to interfere with the driving mechanism. When, however, the engine is connected with a threshing or other machine, the dog and pawl are connected with the lever, so that they will engage with the idler.

To move the engine away from the machine, the long arm of the lever is depressed, when the dog thereof will move the idler the distance of one tooth, the pivoted pawl also engaging with the idler to hold it against backward movement. The movement of the idler will be transmitted to the driving-wheels through the cog-wheel 1 and connections. If such movement of the lever is not sufficient to move the engine the proper distance, the lever is elevated and the operation repeated. It will thus be seen that the dog and pawl engage alternately with the teeth of the idler, the pawl only being disengaged therefrom when the dog is moving the same, thus ren-

dering the backward movement of the idler impossible. To relieve the pawl from the pressure of the idler, so that it can be removed from its pivot, the finger at the outer end of the lever is engaged with one of the teeth of the idler by an upward movement of the lever. (See Fig. 2.) A still further movement of the lever will move the idler a sufficient distance to allow disengagement therefrom of the pawl, when the latter can be readily removed from its pivot.

From the above it will be seen that the belt can be tightened by the movement of the engine without stopping the operation thereof or of the machine connected therewith.

While I have described the invention as being applied to traction-engines, it is obvious that it can be used in connection with any portable engine by supplying the latter with

a pinion on one of the axles and a cog-wheel meshing therewith, with which the idler engages.

Having thus fully described my invention, what I claim is—

The combination with the idler cog-wheel, of the lever having a finger at one end, the dog having a rounded head with a slot therein pivoted to said lever, the pawl having a slotted rounded head, and the retaining-pins secured to said lever and bearing against said rounded heads, substantially as described.

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

GEORGE E. TRAVIS.

Witnesses:

JAMES A. McNABB,
JOHN M. McNABB.