

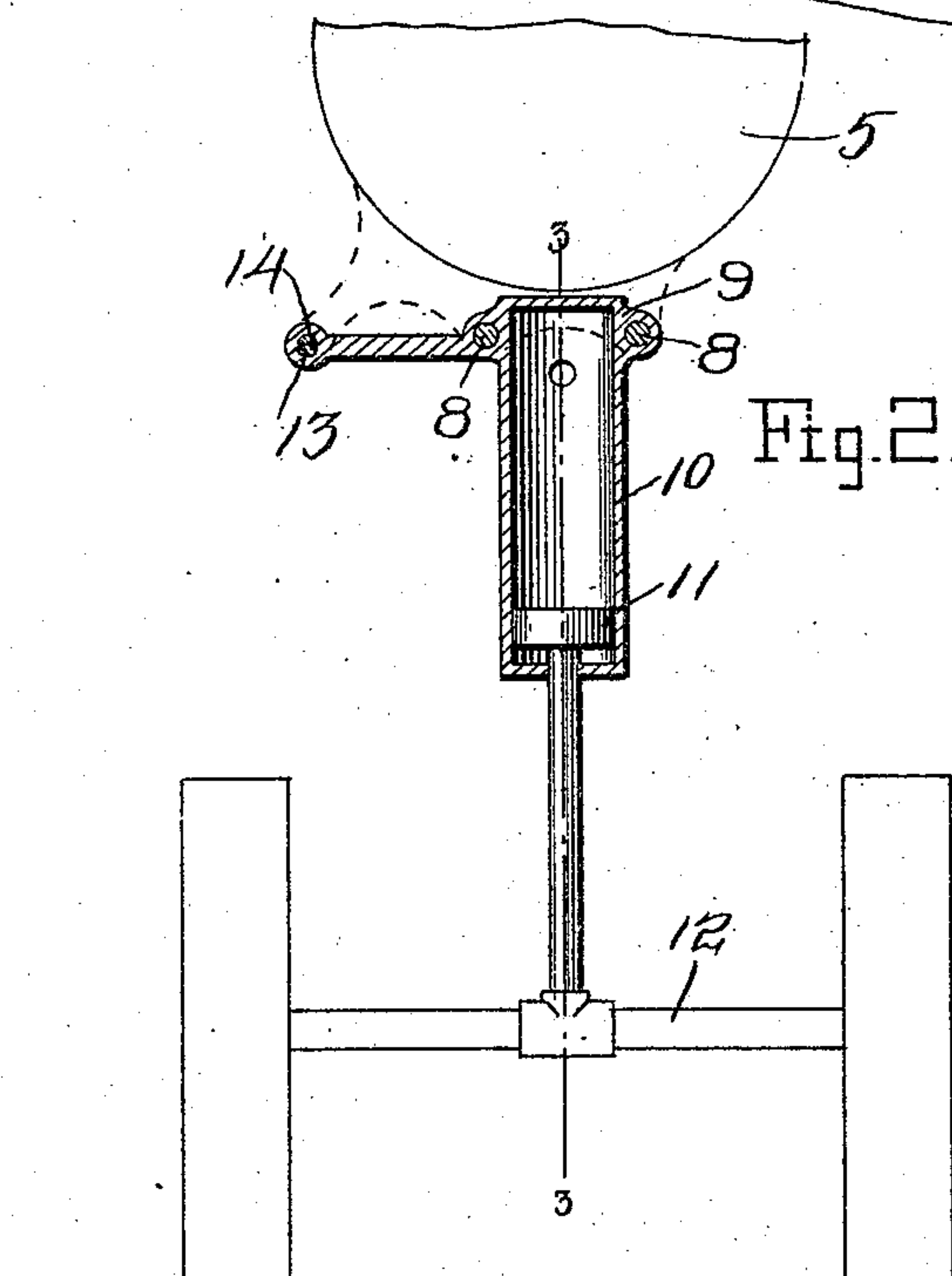
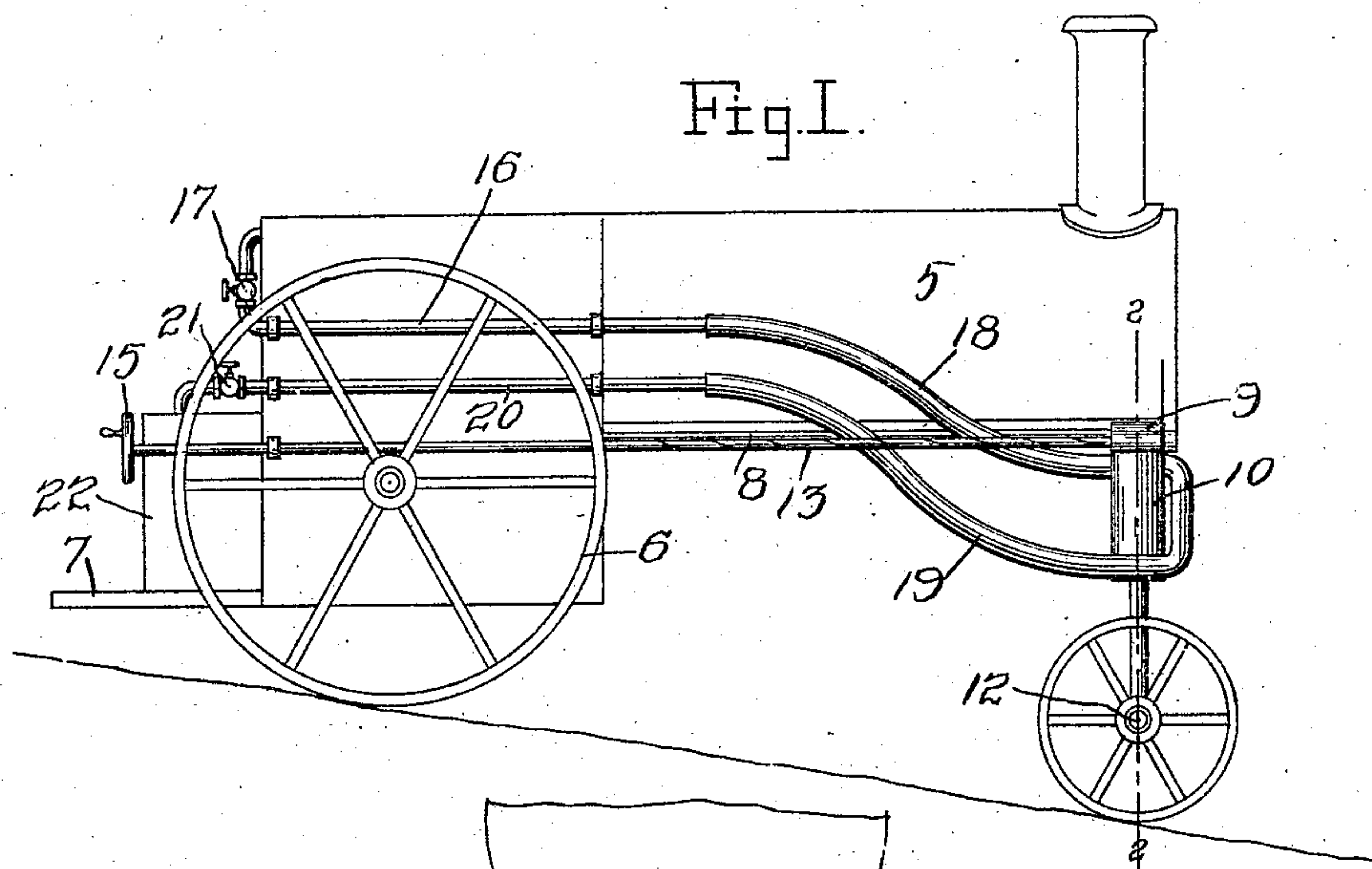
No. 857,180.

PATENTED JUNE 18, 1907.

L. Y. KEIBLER.
TRACTION ENGINE.

APPLICATION FILED MAR. 17, 1906.

2 SHEETS—SHEET 1.



Witnesses

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J. C. Jones

Inventor

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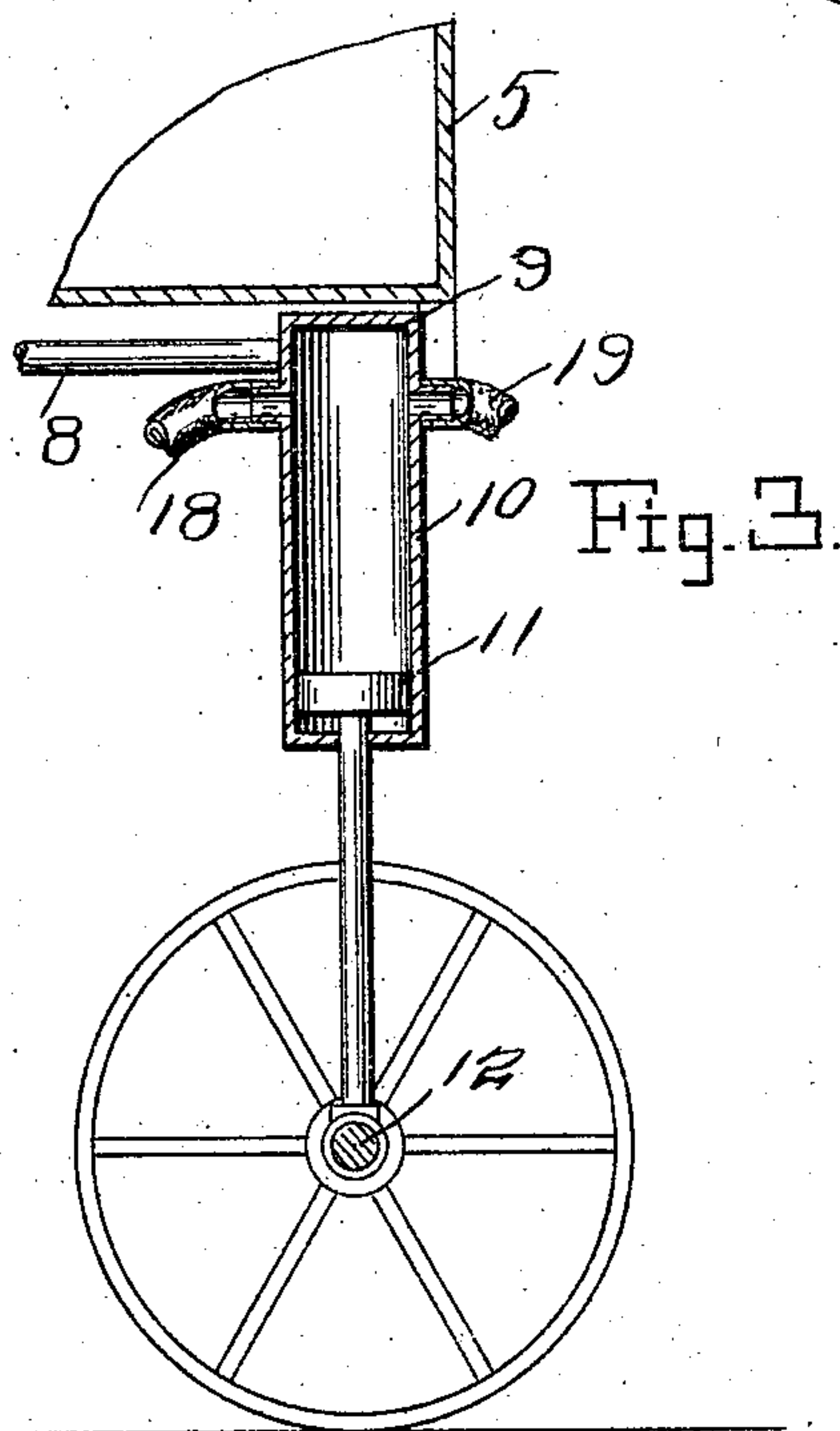
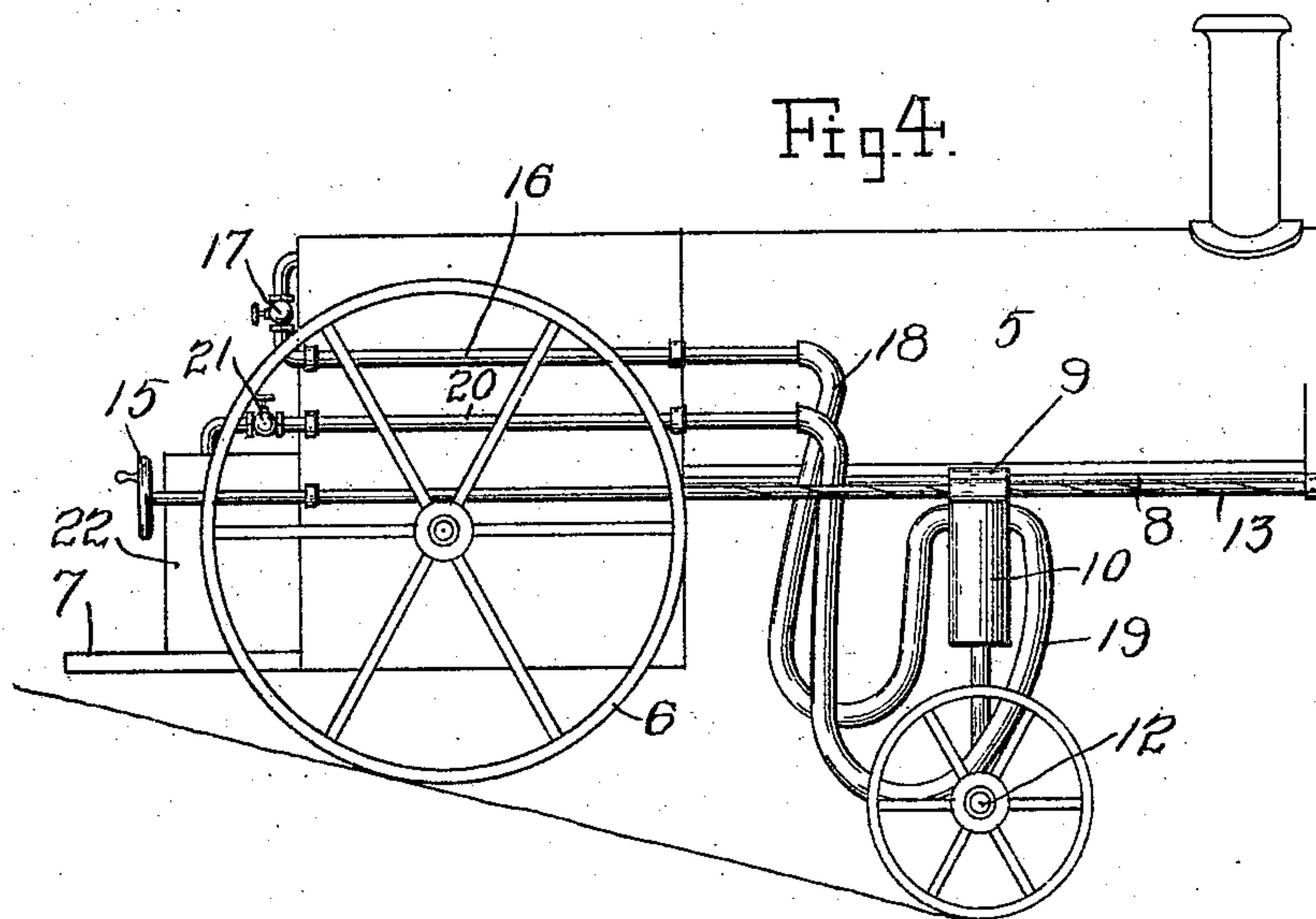
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2 SHEETS—SHEET 2.



Witnesses
G. H. Reichenbach.
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UNITED STATES PATENT OFFICE.

LUTHER Y. KEIBLER, OF SALTSBURG, PENNSYLVANIA.

TRACTION-ENGINE.

No. 857,180.

Specification of Letters Patent.

Patented June

Application filed March 17, 1906. Serial No. 306,649.

To all whom it may concern:

Be it known that I, LUTHER Y. KEIBLER, a citizen of the United States, residing at Saltsburg, in the county of Indiana, 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 engines and more particularly to traction engines and has for its object to provide means in a traction engine for maintaining the boiler in level position on grades, the means being movable to give wide range of adjustment.

Other objects and advantages will be apparent from the following description.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the present invention, the engine being shown as descending a hill. Fig. 2 is a cross section taken on line 2—2 of Fig. 1 through the cylinder and longitudinally of the front axle. Fig. 3 is a central longitudinal section taken on line 3—3 of Fig. 2. Fig. 4 is a view similar to Fig. 1 showing the engine descending a steeper grade.

Referring now to the drawings, there is shown a traction engine including a boiler 5 rear wheels 6 and driver's platform 7. Mounted longitudinally upon the boiler and therebeneath, there is a pair of spaced guides 8, in which there is mounted a slide 9, and secured to the slide, there is a depending cylinder 10 which is open at its lower end. A piston 11 fits snugly within the cylinder 10 for sliding movement and has a wheeled front axle 12 pivoted to its lower end.

A worm shaft 13 is journaled upon the boiler and receives teeth 14 carried by the slide 9, so that the slide is moved longitudinally of the boiler when the shaft is operated, and the shaft has a hand wheel 15 at its rearward end lying in position to be reached from the platform 7.

A water pipe 16 communicates with the boiler and is provided with a valve 17 and a flexible pipe 18 communicates with the water pipe and with the upper portion of the cylinder 10. A flexible exhaust pipe 19 communicates with the cylinder and with a pipe 20 having a valve 21, it being understood that

the valves 17 and 21 are disposed to be reached from the platform 7.

In use, should it be desired to descend a grade, the valve 17 is opened which admits water under pressure to the cylinder 10, and, as will be readily understood, the forward end of the boiler is raised. If the hill be so steep that the boiler cannot be raised sufficiently by the cylinder, the shaft 13 may be revolved to move the slide rearwardly and further raise the boiler, as will be readily understood. Upon reaching a level, the valve 21 may be opened, the valve 17 having been shut, and a sufficient amount of water permitted to pass from the cylinder to level the boiler when the valve is closed. When descending a hill, it is but necessary to open the exhaust valve 21 which will permit the forward end of the boiler to sink or the slide may be moved forwardly beyond its normal position.

It will be seen from the drawings, the pipe 20 discharges into the water tank 22 so that the water used in operating the boiler lever of the mechanism, is not wasted.

What is claimed is:

1. In a traction engine, the combination with a boiler having wheels at one end, of wheels connected with the boiler at its other end, and means located between the boiler and the last named wheels for moving the boiler vertically with respect to the wheels, said means being shiftable longitudinally of the boiler.

2. In a traction engine, the combination with a wheeled boiler, of means for moving one end of the boiler with respect to the wheels, said means being shiftable longitudinally of the boiler.

3. In a traction engine, the combination with a wheeled boiler, of means for moving one end of the boiler with respect to the wheels, said means being shiftable longitudinally of the boiler, and means for shifting the boiler-moving means.

4. In a traction engine, the combination with a wheeled boiler, of pressure operable means for moving one end of the boiler vertically with respect to the wheels, connections between said moving means and the boiler for the passage of fluid under pressure to the means, said means being shiftable longitudinally of the boiler, and means for shifting the boiler-moving means.

5. In a traction engine, the combination with a wheeled boiler, of means for moving

one end of the boiler vertically with respect to the wheels, said means being arranged for operation by fluid pressure, a pipe communicating with the boiler and with the means
5 for the passage of water under pressure to said means, a valve in the pipe, an exhaust pipe communicating with said means, a water tank for the boiler, said exhaust pipe being arranged to discharge into said tank, and
10 a valve for the exhaust pipe.

6. The combination with a wheeled horizontal boiler, of a worm shaft carried by the boiler longitudinally thereof, fluid operable mechanism mounted upon the shaft for
15 movement longitudinally thereof when the

shaft is revolved, said mechanism being arranged for operation to move the boiler vertically, flexible means for conducting fluid under pressure from the boiler to the fluid operable mechanism, a water tank carried by
20 the boiler, flexible means for conveying fluid from the pressure operable means to the water tank, and valves for the fluid-conveying means.

In testimony whereof, I affix my signature, 25
in presence of two witnesses.

LUTHER Y. KEIBLER.

Witnesses:

H. C. WADDELL,
ROBT. T. PAUL.