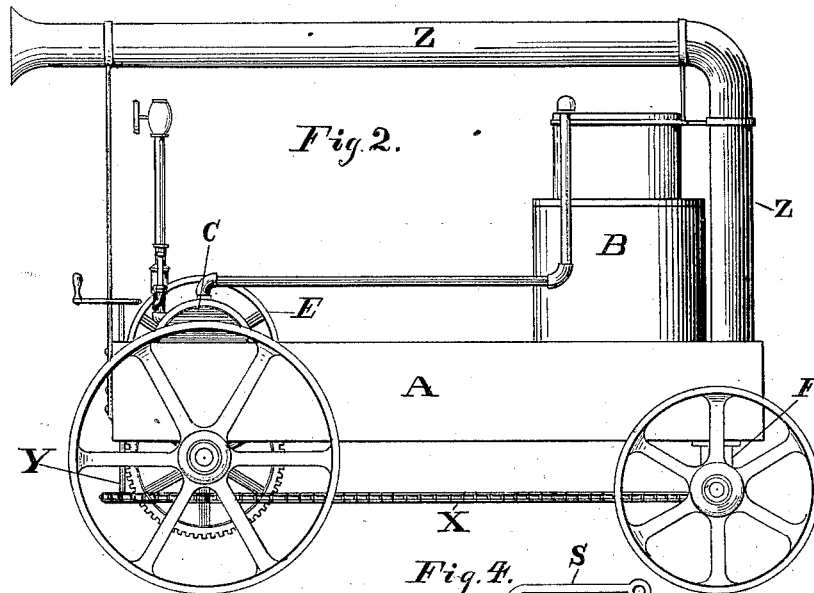
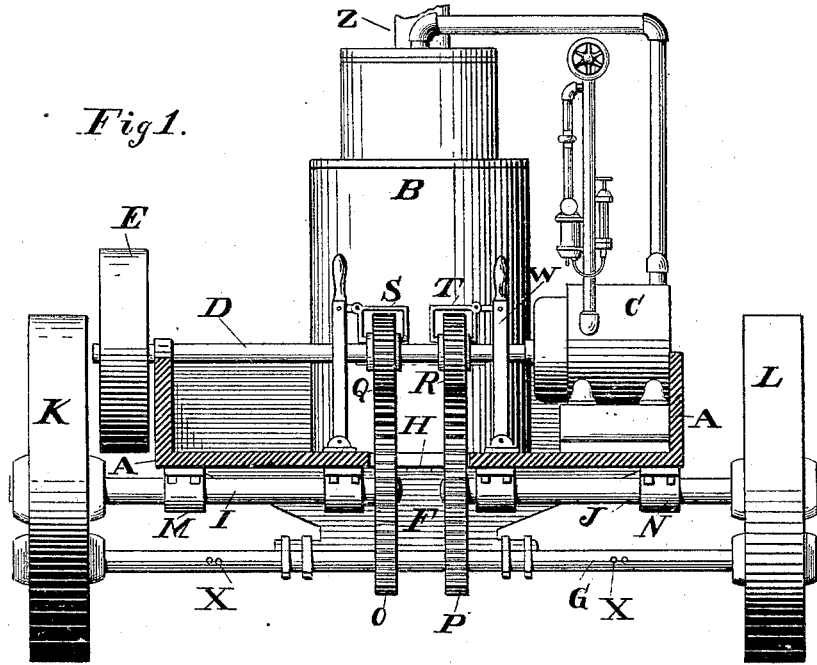


(No Model.)

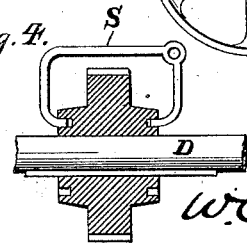
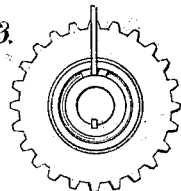
P. H. LOUD.
TRACTION ENGINE.

No. 271,343.

Patented Jan. 30, 1883.



WITNESSES:
M. H. Culver
John D. Lester



INVENTOR
P. H. Loud
 By his Attorneys,
W. C. Strawbridge
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UNITED STATES PATENT OFFICE.

PHILOLOGUS H. LOUD, OF WILLISTON, SOUTH CAROLINA.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 271,343, dated January 30, 1883.

Application filed July 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, PHILOLOGUS H. LOUD, of Williston, Barnwell county, South Carolina, have invented an Improved Traction-Engine, of which the following is a specification.

In the drawings, Figure 1 is a vertical transverse view, partly in section and partly in elevation, of an engine embodying my invention; and Fig. 2 is a vertical longitudinal view of the same. Figs. 3 and 4 are detail views.

Similar letters of reference indicate like parts.

My invention relates to that class of engines which are capable of moving themselves from place to place, and which are adapted to the driving of plantation, farm, and mill machinery; and it consists as hereinafter described and claimed.

A is the main frame or bed of the engine, upon which rests and is supported, in the usual manner, the boiler B, engine C, driving-shaft and pulley D E, all of the ordinary construction. The main frame is at its forward end supported, in the usual manner, upon a bolster, F, and axle G, and is attached thereto by a king-bolt, H. The rear axle is divided into two parts, I and J, to which the road-wheels K and L are respectively fixedly attached. The axles of the wheels K and L work in bearings M and N, attached to the under side of the main frame A. To the inner extremities of said axles are attached spur-wheels O and P. Upon the driving-shaft D are mounted two spur-wheels, Q R, said shaft being provided with a feather, a, and said spur-wheels being provided with corresponding grooves, as shown in Fig. 1, and as shown in detail in Figs. 3 and 4, whereby said spur-wheels, by means of shifting-links S and T and levers U and V, may be thrown into or out of gear with the spur-wheels O and P.

X is a chain, the ends of which, X' X'', are attached to the outer extremities of the forward axle, G, said chain being passed around a wheel mounted upon the lower end of the brake-shaft Y, and adapted to be operated

thereby for the purpose of vibrating the axle G and steering the engine when the same is in transit.

Z is the smoke-stack, which vertically rises to a point above the boiler, and is then caused to run in a horizontal plane to the rear of the engine, whereby a more perfect draft is produced than by the ordinary smoke-stack, without adding to the height of the stack or producing unwieldiness of the machine.

When the engine is traveling from place to place, and is in the act of turning a corner or traveling in a curve, one road-wheel is disposed to travel more slowly than the other, or, if the turn be an abrupt one, to stand still or to turn in a backward direction. When the road-wheels are fixedly attached to the same axle both wheels must revolve together. It is obvious that my invention permits the driving spur-wheel of either or both road-wheels to be thrown out of or into gear with the spur-wheels of the driving-shaft at pleasure, and thus, when desired, each road-wheel may revolve independently of the other.

Having thus described my invention, I claim—

1. In a traction-engine, a divided axle, J, having fixedly attached to one extremity a road-wheel, L, and to the other extremity thereof a spur-wheel, F, in combination with the driving-shaft D of the engine, provided with a spur-wheel, R, longitudinally adjustable upon said shaft, as and for the purpose specified.

2. In a traction-engine, in combination, the divided axle J, provided with the road-wheel L and the spur-wheel F, attached rigidly to the respective extremities thereof, the driving-shaft D, provided with the pinion R, feathered thereon, the shifting-link S, and lever U, as and for the purpose specified.

In testimony whereof I have hereunto set my hand this 24th day of July, A. D. 1882.

PHILOLOGUS H. LOUD.

Witnesses:

H. M. THOMPSON,
J. G. THOMPSON.