

(No Model.)

G. A. THODE.
TRACTION ENGINE.

No. 287,593.

Patented Oct. 30, 1883.

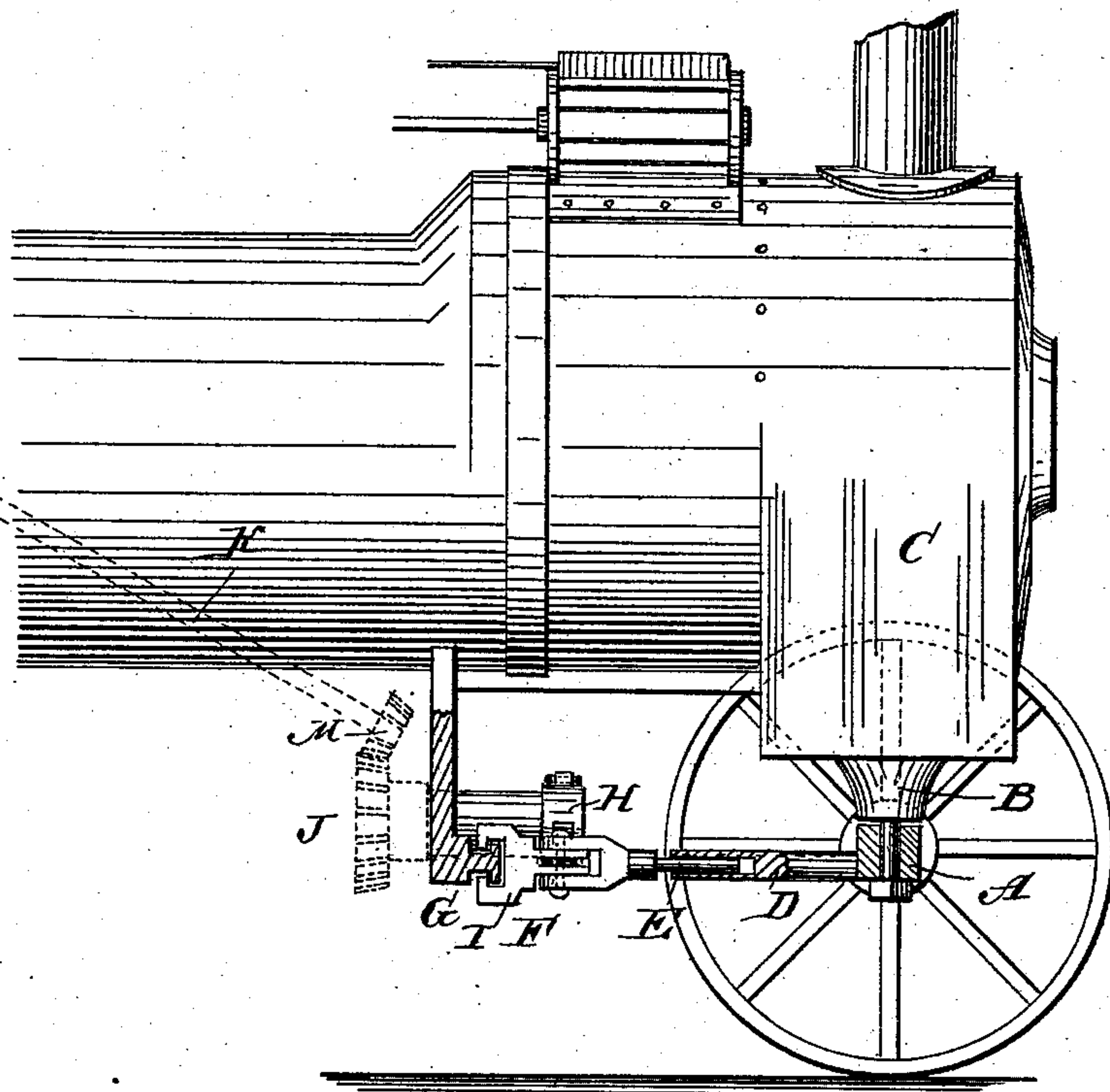


Fig. 1.

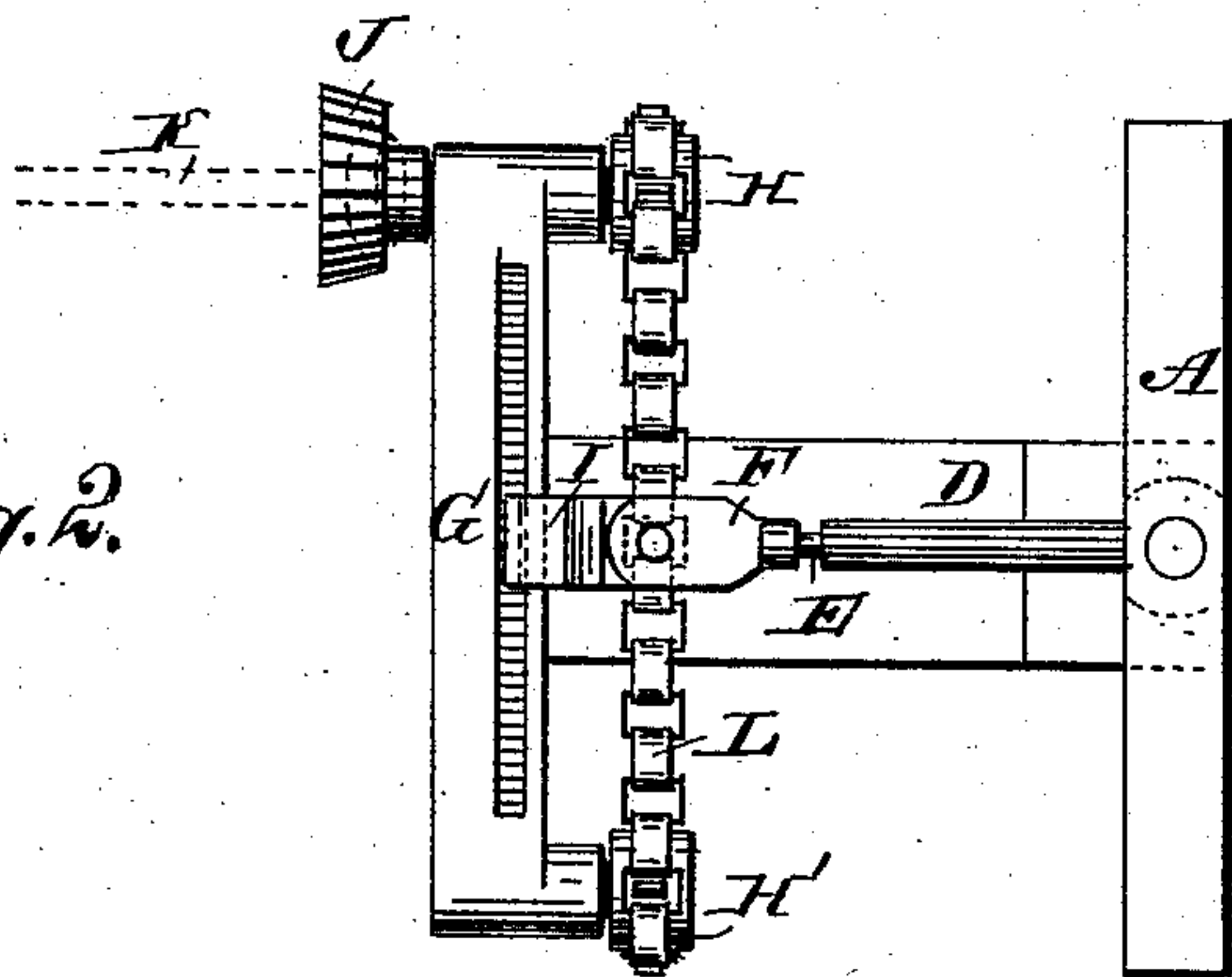


Fig. 2.

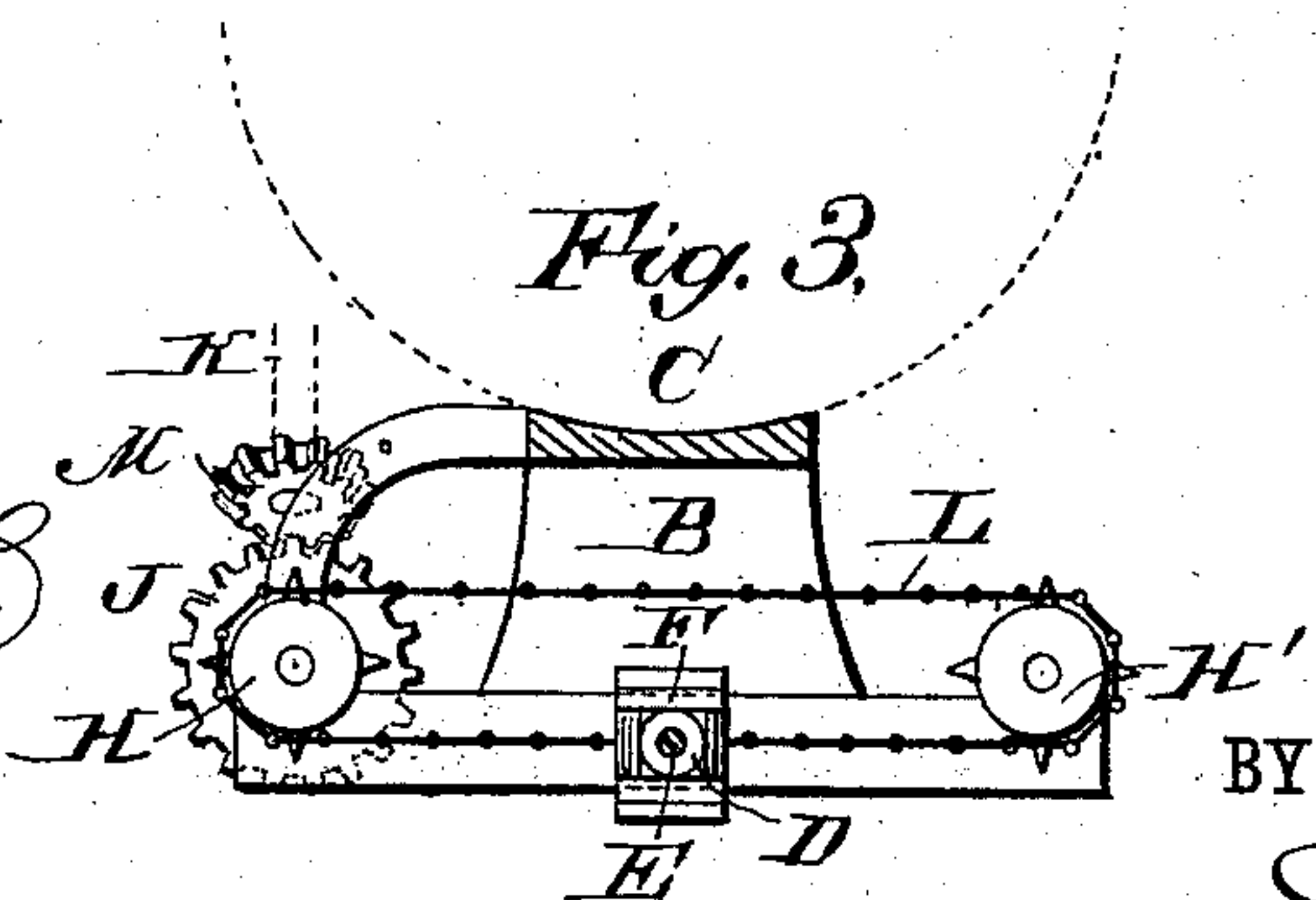


Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

GUSTAV A. THODE, OF HOLSTEIN, IOWA.

TRACTION-ENGINE.

SPECIFICATION forming part of Letters Patent No. 287,593, dated October 30, 1883.

Application filed August 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV A. THODE, of Holstein, in the county of Ida and State of Iowa, have invented a new and Improved
5 Guide Mechanism for Traction-Engines, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved mechanism for turning the
10 front axle of a traction-engine to guide the engine in the desired direction.

The invention consists in a pivoted axle carrying the steering-wheels, and provided with a tongue connected with an endless chain
15 passed over two sprocket-wheels, which can be revolved by means of suitable devices by the engineer, whereby the chain can be moved in one direction or the other, and the axle turned to one side of the engine or the other.

20 Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side view of the front part of a traction-engine provided with my improvement, parts being broken out and others shown in section. Fig. 2 is an inverted plan view of the same. Fig. 3 is a cross-sectional view.

30 The front axle, A, is journaled to the bottom of the fixed bolster B, on which the boiler C rests. The axle A is provided with a backwardly-projecting tongue, D, the free end of which is provided with a longitudinal aperture for receiving the stem E of a fork, F,
35 pivoted to a block, I, clamping the edge of a grooved transverse bar, G, on which it is adapted to slide transversely to the longitudinal axis of the traction-engine. Two sprocket-wheels, H and H', are journaled on the ends
40 of the bar G, and on the shaft of the wheel H a slightly-beveled cog-wheel, J, is mounted, which engages with a cog-wheel, M, mounted on the lower end of a downwardly-inclined
45 shaft, K, provided at its upper end with a hand-wheel or like device, which must be within easy reach of the engineer. An endless driving-chain, L, is passed around the sprocket-wheels H H', and is securely fastened
50 to the block F. If the shaft K is turned by

the engineer, the cog-wheel M will be turned and will turn the cog-wheel J, with which it engages. Thereby the lower part of the endless chain L will be drawn toward one side of the engine or toward the other. The block I
55 is securely fastened to the upper strand of the chain, and consequently will be moved toward one side of the engine or the other if the shaft K is turned. The moving block I acts on the tongue D, and thus inclines the front axle, A,
60 to the longitudinal axis of the engine. The engine will always be guided in the direction opposite to that in which the sliding block I moves.

I do not abandon or dedicate to the public
65 any patentable feature set forth herein and not hereinafter claimed, but reserve the right to claim the same either in a reissue of any patent that may be granted upon this application or in any other application for Letters
70 Patent that I may make.

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

1. A guide mechanism for traction-engines, consisting of an endless chain passing over
75 sprocket-wheels connected with gearing for operating them, which chain is connected with the tongue of a pivoted axle, substantially as herein shown and described.

2. In a guide mechanism for traction-en-
80 gines, the combination, with a pivoted axle carrying the steering-wheels, of a tongue projecting from the said axle, a sliding block held on the free end of the tongue, an endless chain secured to the sliding block, sprocket-wheels
85 over which the chain passes, and means for revolving the sprocket-wheels, substantially as herein shown and described.

3. In a guide mechanism for traction-engines, the combination, with a pivoted axle
90 carrying the steering-wheels, of a tongue projecting from the same, a sliding block on the free end of the tongue, a grooved cross-bar on which the block slides, an endless chain secured to the sliding block, sprocket-wheels
95 over which the chain passes, and means for revolving the said sprocket-wheels, substantially as herein shown and described.

4. In a guide mechanism for traction-engines, the combination, with a pivoted axle
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carrying the steering-wheels, of a tongue projecting from the said axle, a fork held in the end of the tongue, a sliding block to which the tongue is pivoted, a grooved bar on which the block can slide, an endless chain secured to the block, sprocket-wheels over which the chain passes, and means for revolving the sprocket-wheels, substantially as herein shown and described.

10 5. In a guide mechanism for traction-engines, the combination, with a pivoted axle carrying the steering-wheels, of a tongue projecting from the axle, which tongue has its outer end apertured longitudinally, a fork having a stem fitting loosely in the aperture in the end of the tongue, a sliding block to which the fork is pivoted, a grooved bar on which the block slides, an endless chain fastened to the sliding block, sprocket-wheels over which

the chain passes, and means for revolving the sprocket-wheels, substantially as herein shown and described.

6. In a guide mechanism for traction-engines, the combination, with a pivoted axle carrying the steering-wheels, of a tongue projecting from the axle, an endless chain, L, connected with the free end of the axle, the sprocket-wheels H H', over which the chain passes, a cog-wheel, J, mounted on the shaft of the sprocket-wheel H, the cog-wheel M, engaging with the cog-wheel J, and the shaft K, on the end of which the cog-wheel J is mounted, substantially as herein shown and described.

GUSTAV A. THODE.

Witnesses:

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HERMAN THODE.