

(No Model.)

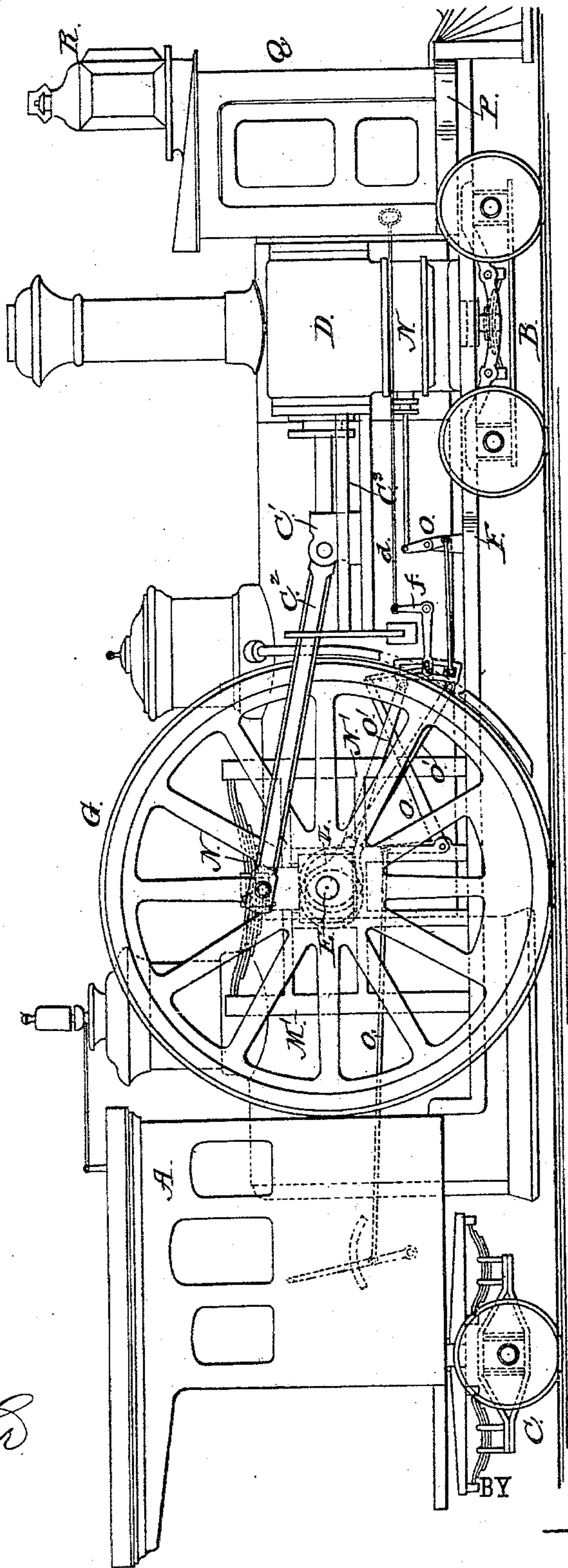
3 Sheets—Sheet 1.

W. J. TRIPP.  
LOCOMOTIVE ENGINE.

No. 369,482.

Patented Sept. 6, 1887.

Fig. 1.



WITNESSES:  
*Geo Beyer*  
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INVENTOR:  
*W. J. Tripp*  
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ATTORNEYS.

(No Model.)

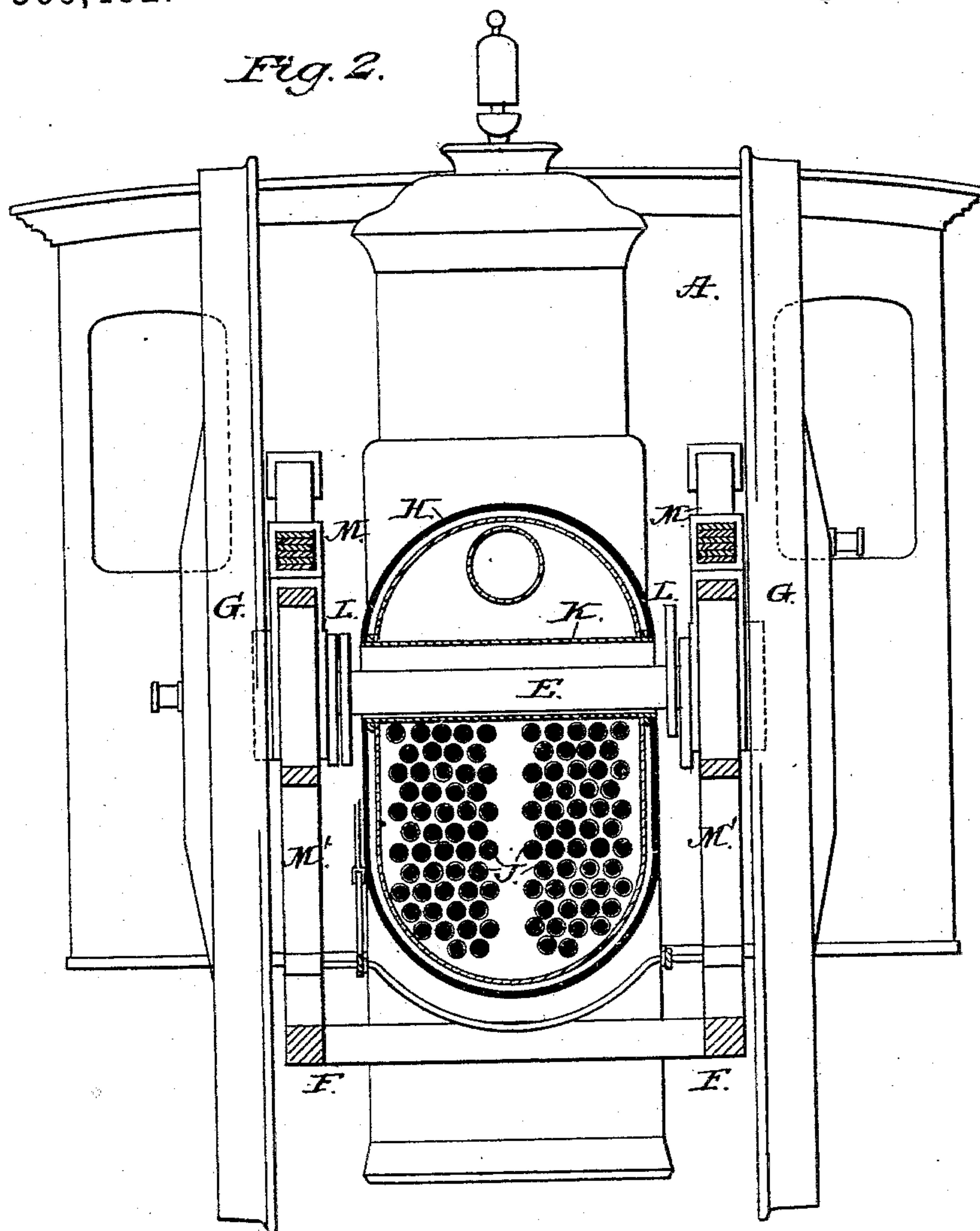
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W. J. TRIPP.  
LOCOMOTIVE ENGINE.

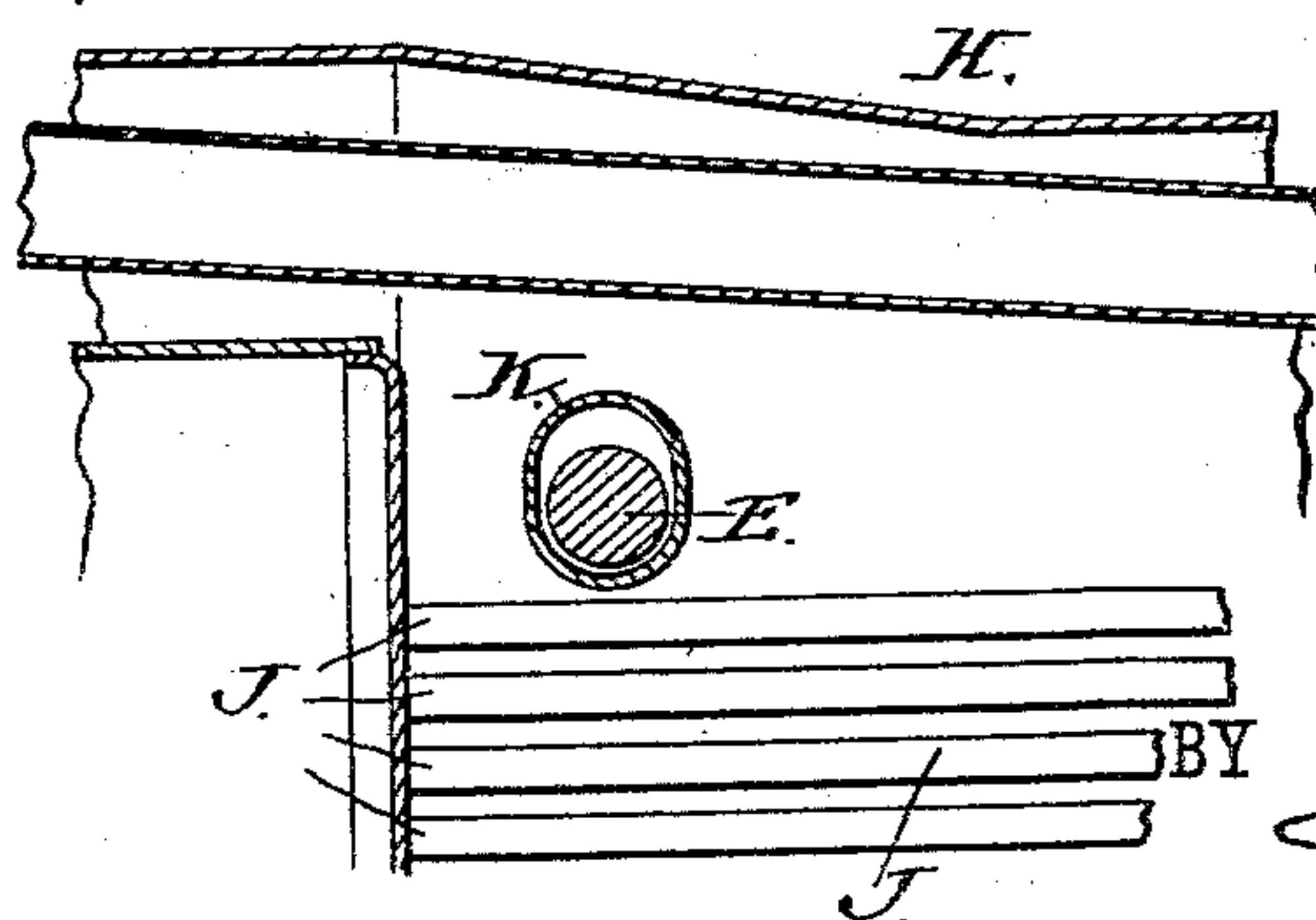
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*Fig. 2.*



*Fig. 3.*



WITNESSES:

to George  
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**INVENTOR:**

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(No Model.)

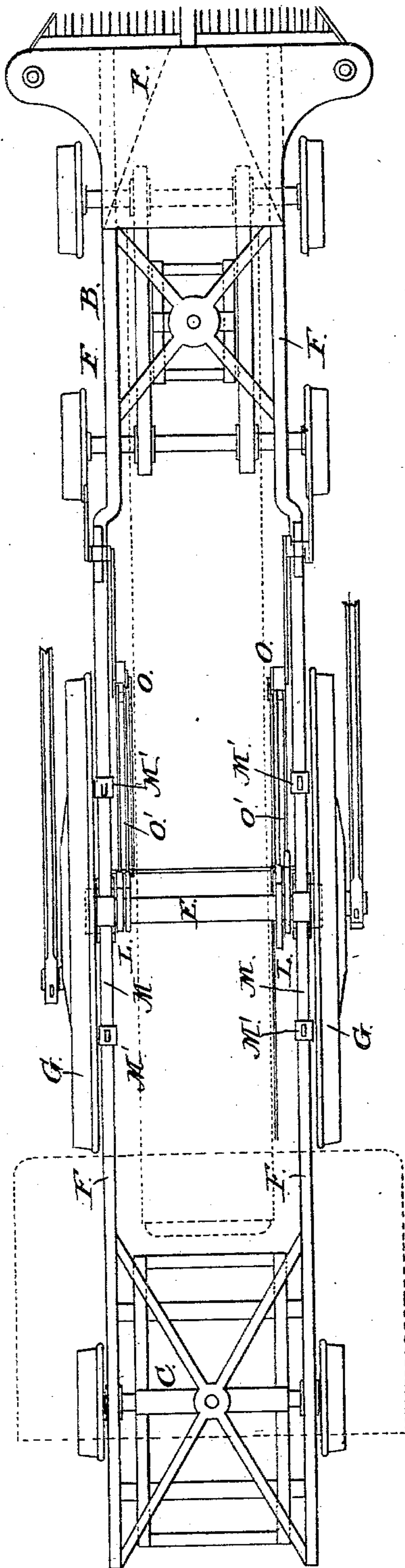
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Fig. 4.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

WILLIAM JAY TRIPP, OF NEW YORK, N. Y.

## LOCOMOTIVE-ENGINE.

SPECIFICATION forming part of Letters Patent No. 369,482, dated September 6, 1887.

Application filed November 4, 1886. Serial No. 217,979. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM JAY TRIPP, of the city, county, and State of New York, have invented a new and Improved Locomotive-Engine, of which the following is a full, clear, and exact description.

The object of my invention is to provide a locomotive-engine intended for high speed—that is, one provided with drive-wheels of large diameter, and which is constructed to avoid top-heaviness, the preponderance of weight being below the main axle and as near the track as possible, so that the locomotive running at high speed will not have more “lurch” than a locomotive of the ordinary construction and design.

The invention consists of the various constructions and arrangements of the parts of the locomotive, as hereinafter described and claimed.

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

Figure 1 is a side elevation of a locomotive made in accordance with my invention. Fig. 2 is a transverse sectional elevation. Fig. 3 is a detailed view of a part of the boiler and main axle; and Fig. 4 is a plan view of the frame of the engine and the drive-wheels, the boiler and cab being shown in dotted lines.

The cab A, front and rear trucks, B C, and cylinders D are of the usual construction, except that the cylinders are somewhat elevated to suit the elevated position of the main axle E, and that the wheels of the trucks are somewhat less in diameter than usual to set the main frame F as low as practicable. The drive-wheels G are of large diameter—twelve feet or thereabout—and the main axle E, on which they are secured, passes through the boiler H above the flues J, so that the preponderance of weight of the boiler is below the main axle E. A transverse tube, K, is fitted in the boiler H for the passage of the axle E, and the boiler is flattened at its sides and elongated vertically to gain as great boiler area as possible, and yet furnish space between the

sides of the boiler and the drive-wheels for the eccentrics L L and the springs M M, supported upon axle-boxes next to the drive-wheels. The main frame F reaches from the forward truck, B, to the rear truck, C, and the boiler and the accessories of the locomotive are supported by it, and it is connected to the ends of the heavy springs M M by the side upright standards or frames, M' M', so that the boiler and main frame are suspended in the center by the springs from and below the main axle, and the transverse tube K through the boiler is made considerably larger than the main axle E, so there is no direct connection of the boiler with the axle.

To compensate in a degree for the elevation of weight due to elevating the cylinders D, the cross-heads C', pitman-rods C<sup>2</sup>, and cross-head guide-bars C<sup>3</sup> in line with the axle E, (which, by the way, might be avoided by an oblique arrangement of the cylinders and cross-head guides, which, for the sake of appearance, I prefer to avoid,) I place the steam-chests N below the cylinders. The links and valve-motion O are placed in line with the steam-chests, and the link-connecting rods O' are projected obliquely downward from the eccentrics L to suit this location, as shown clearly in Fig. 1.

At the front of the boiler, upon a platform, P, is placed the pilot-house Q, for the engineer, so he will have an unobstructed view of the track, and upon the pilot-house is placed the head-light R, as shown in Fig. 1, and by means of rod d and bell-crank f the engineer will have control of the valve-motion for starting and stopping the locomotive.

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

1. The boiler H of a locomotive-engine, having the transverse tube K fitted in it above the flues J and in front of the fire-box, in combination with the axle E, passed through the tube K, the drive-wheels G, of large diameter, and the frame F, supporting the boiler and suspended from the springs M, supported upon the axle-boxes, whereby the preponderance

of weight of the boiler is below the axle and the boiler relieved of the jar of the drive-wheels, substantially as described.

2. The locomotive-boiler H, provided with  
5 the transverse tube K above the flues J and in front of the fire-box, in combination with the axle E, passed through the tube K, the drive-wheels G, of large diameter, and the cyl-

inders D, elevated to a line with the axle, and the steam-chests N, placed beneath the cylinders, whereby the weight of the steam-chest falls below the axle, substantially as described.

WILLIAM JAY TRIPP.

Witnesses:

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