

(No Model.)

C. A. CASE.  
STEAM ROAD ROLLER.

No. 408,372.

Patented Aug. 6, 1889.

Fig. 1.

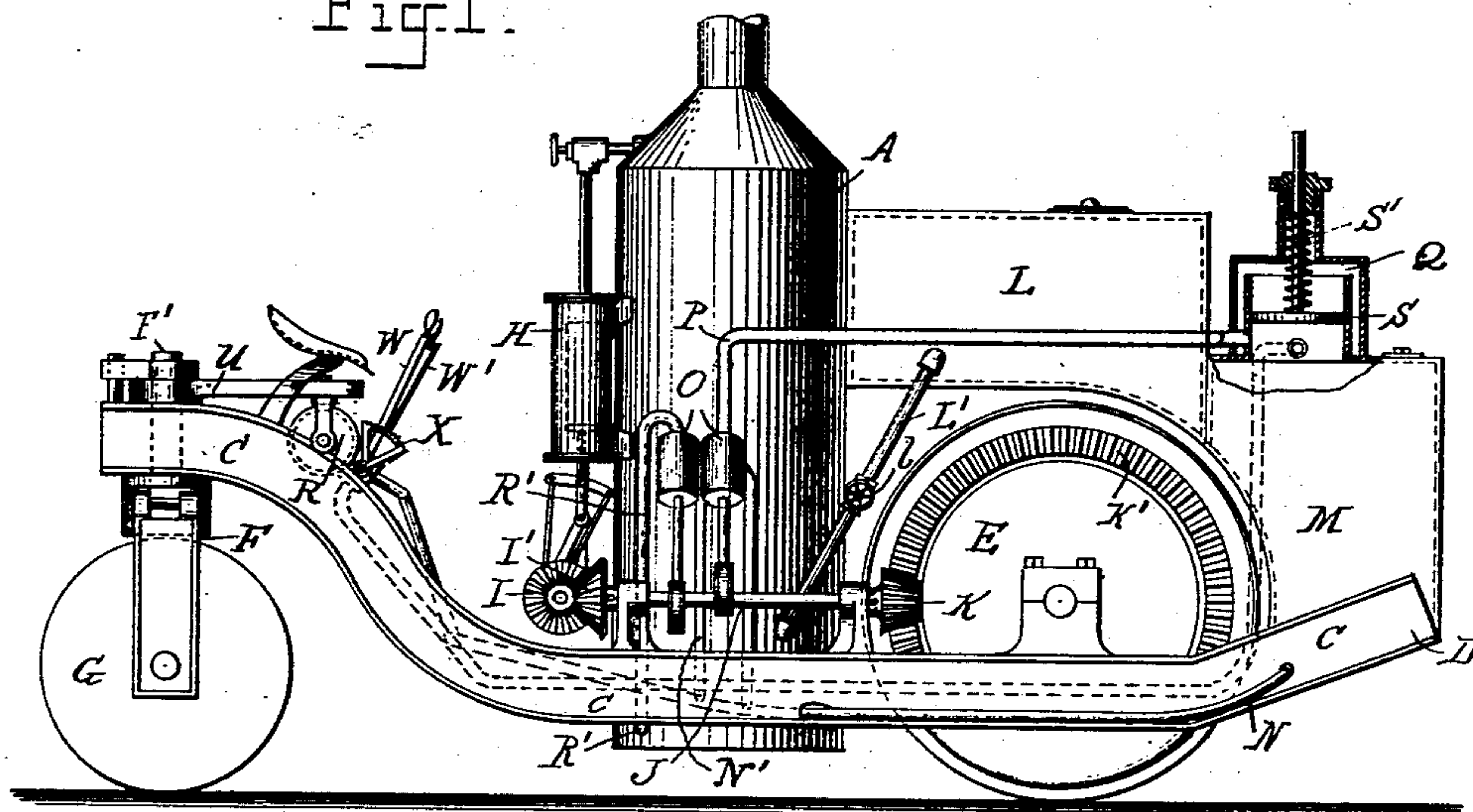


Fig. 2.

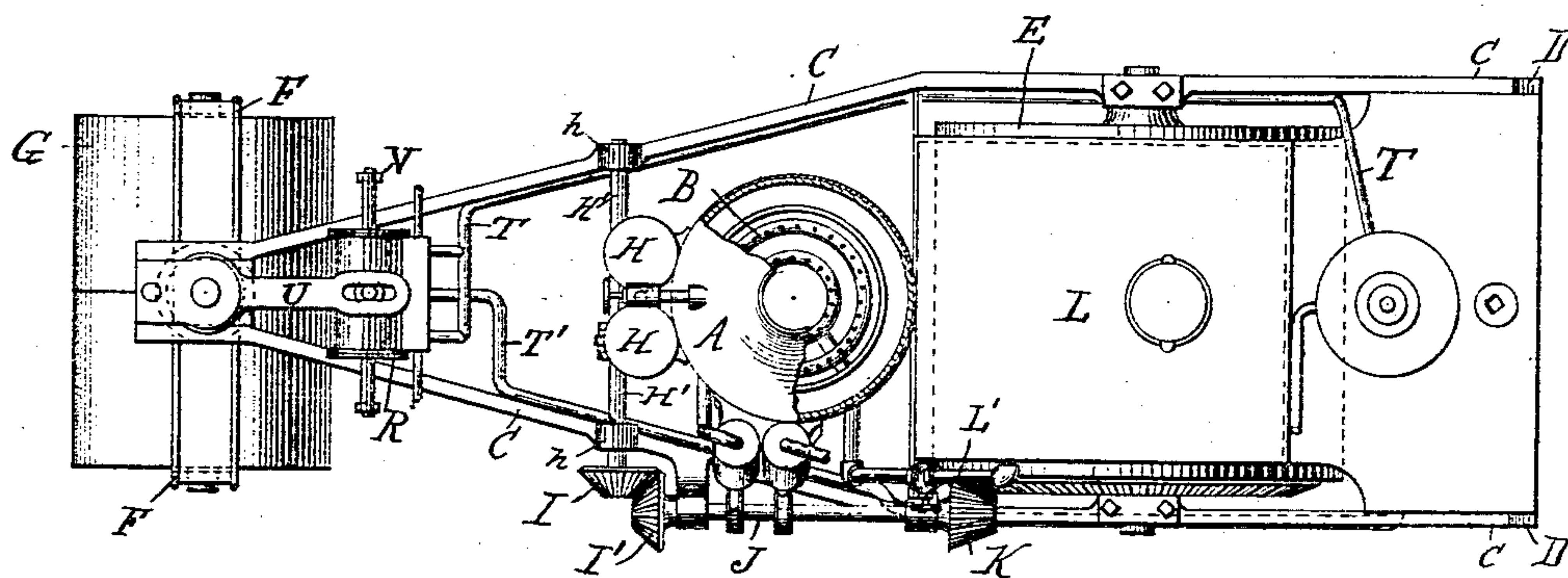
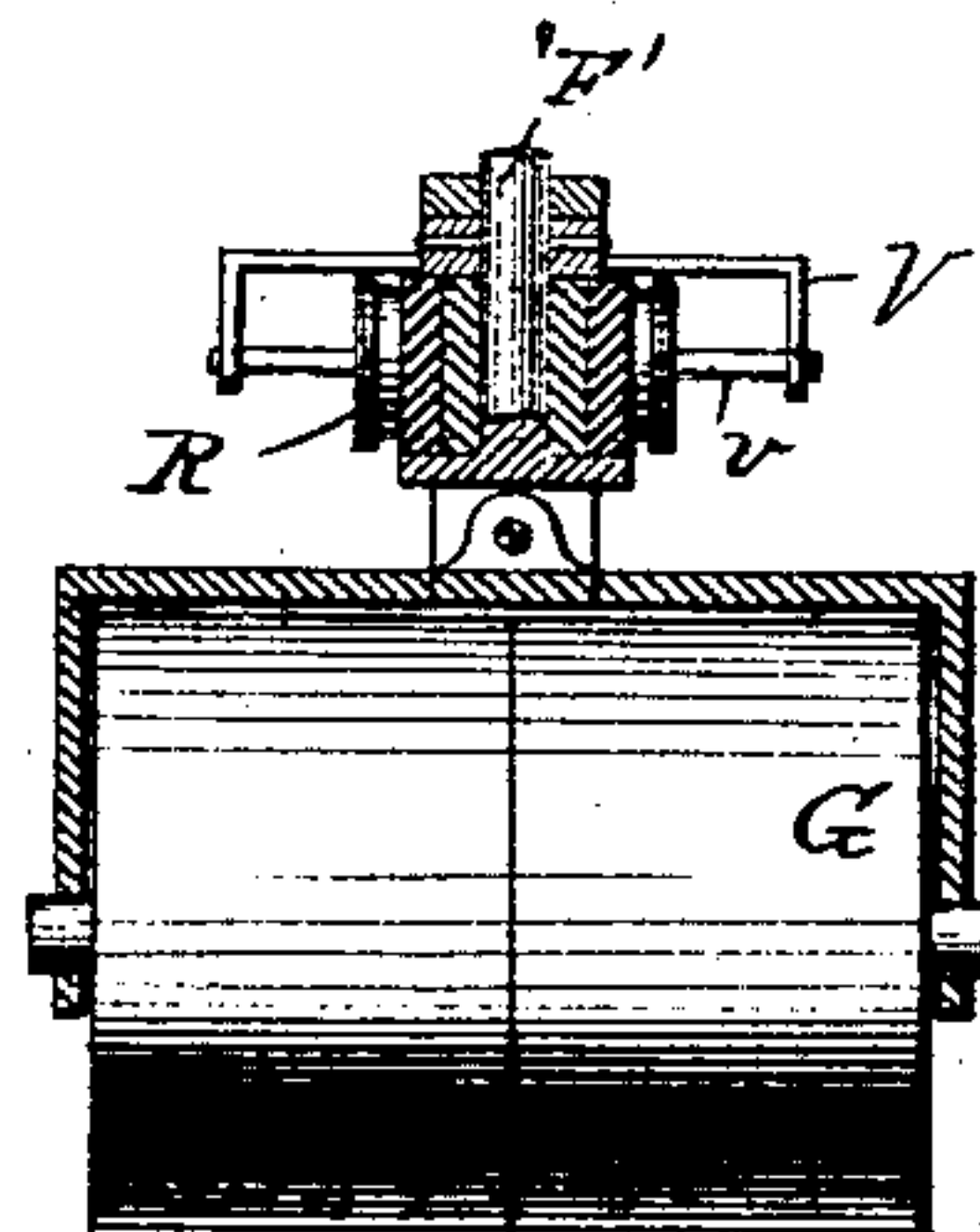


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## STEAM ROAD-ROLLER.

SPECIFICATION forming part of Letters Patent No. 408,372, dated August 6, 1889.

Application filed June 4, 1888. Serial No. 276,055. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. CASE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and Improved Steam-Roller, of which the following is a specification.

This improvement relates to rollers used in the construction of roads made of asphaltum or bituminous rock and gravel and other like substances, which are packed down by pressure after being spread; and it consists of a certain new and improved construction of the parts, which render the machine more effective and more convenient to handle, as hereinafter more specifically set forth.

In the accompanying drawings, Figure 1 is a longitudinal side elevation, Fig. 2 a top or plan view, and Fig. 3 an elevated view, of the guide-roller.

In all the figures the same letters of reference are used to indicate the same parts.

A is a steam-boiler, having at its bottom a fire-chamber provided with a coil of perforated pipe B, the whole hung in iron frame C, the front end of which is turned up, as shown at D. The frame C is attached near its front end to the axle of the roller E and at its rear end to the supporting-frame F, attached by axle to guide-roller G.

H is a pair of steam-engine cylinders set side by side in front of the boiler and connected by cranks to the shaft H', held in bearings h upon the frame C. The outer end of shaft H is provided with a miter-wheel I, which engages with a miter-wheel I' upon a horizontal shaft J, having at its outer end a miter-wheel K, as shown in Fig. 1, which transmits motion to roller E by engaging with beveled gear-wheel K', secured to the head of said roller.

L is an oil-tank, from which the oil is supplied to the perforated coil of pipe B by feed-pipe L', the flow being regulated by a cock therein.

M is a tank, from which water is drawn through pipes N and N' by means of one of a pair of pumps O, secured to the side of the boiler, and forced up through pipe P into trap Q on top of tank M, while the other pump forces the water discharged from the cylinder

der or steering-engine R at the rear of the machine through the pipes T' and R' into the boiler A. The water used in operating the engine or cylinder R is forced therein through pipe T by a piston S in trap Q, governed by a coil-spring S'.

F is the supporting-frame of guide-roller G, connected to the rear end of frame C by bolt F', to which is attached the rear end of tiller-arm U. The front end of tiller U is connected to the frame V, the lower rod v of which passes through the cylinder or engine R and has attached to it the piston thereof, and as the water is alternately let in and out from the respective ends of the cylinder the piston is moved back and forth, causing the tiller U to move to the right or left, turning the guide-roller G, thereby changing the direction of the machine.

W is a lever provided with latch W', which engages with rack X, by means of which the pressure of the water used in the engine or cylinder R is regulated.

The levers for starting and stopping the machine are of such well-known construction that it is not deemed necessary to describe same.

The manner of using my invention is as follows: After the asphaltum is spread the machine is passed forward and backward over the pavement, and, owing to the turning up of the frame at the forward end, can be run closely to the curb and presses the pavement as firmly at that point as at any other, and, further, by means of an auxiliary engine for steering, the engineer is enabled to handle the machine to a better advantage and with more certainty.

It will be readily seen that, if desired, the engine by which the guide-roller is controlled can be operated by air or steam, and by the use of oil as a fuel injury to the freshly-laid pavement by hot coals or ashes dropping from the fire-box is avoided.

What I claim is—

1. In a road-roller, the combination of the boiler A, frame C, roller E, water-tank M, oil-tank L, and guide-roller G, in supporting-frame F operatively connected therewith, substantially as shown and described.

2. In a road-roller, the combination of the boiler A, frame C, roller E, tanks M and L,

guide-roller G, and steering engine or cylinder R, operatively connected therewith, substantially as set forth.

3. In a road-roller, the combination of the  
5 trap Q, provided with a piston S, tank M, engine or cylinder R, pumps O, operatively connected with the trap Q and cylinder R by pipes T, P, N, N', and R', when arranged substantially as shown and described.

4. In a road-roller, the combination of frame 10 C, having its end turned up at D, engine or cylinder R, guide-roller G, supporting-frame F, tiller U, and frame V, as shown and described.

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Witnesses:

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