(No Model.)

T. C. TOWNSEND.

AUTOMATIC DEVICE FOR STOPPING STEAM PUMPS.

No. 294,529. Patented Mar. 4, 1884.

Fig. 2.

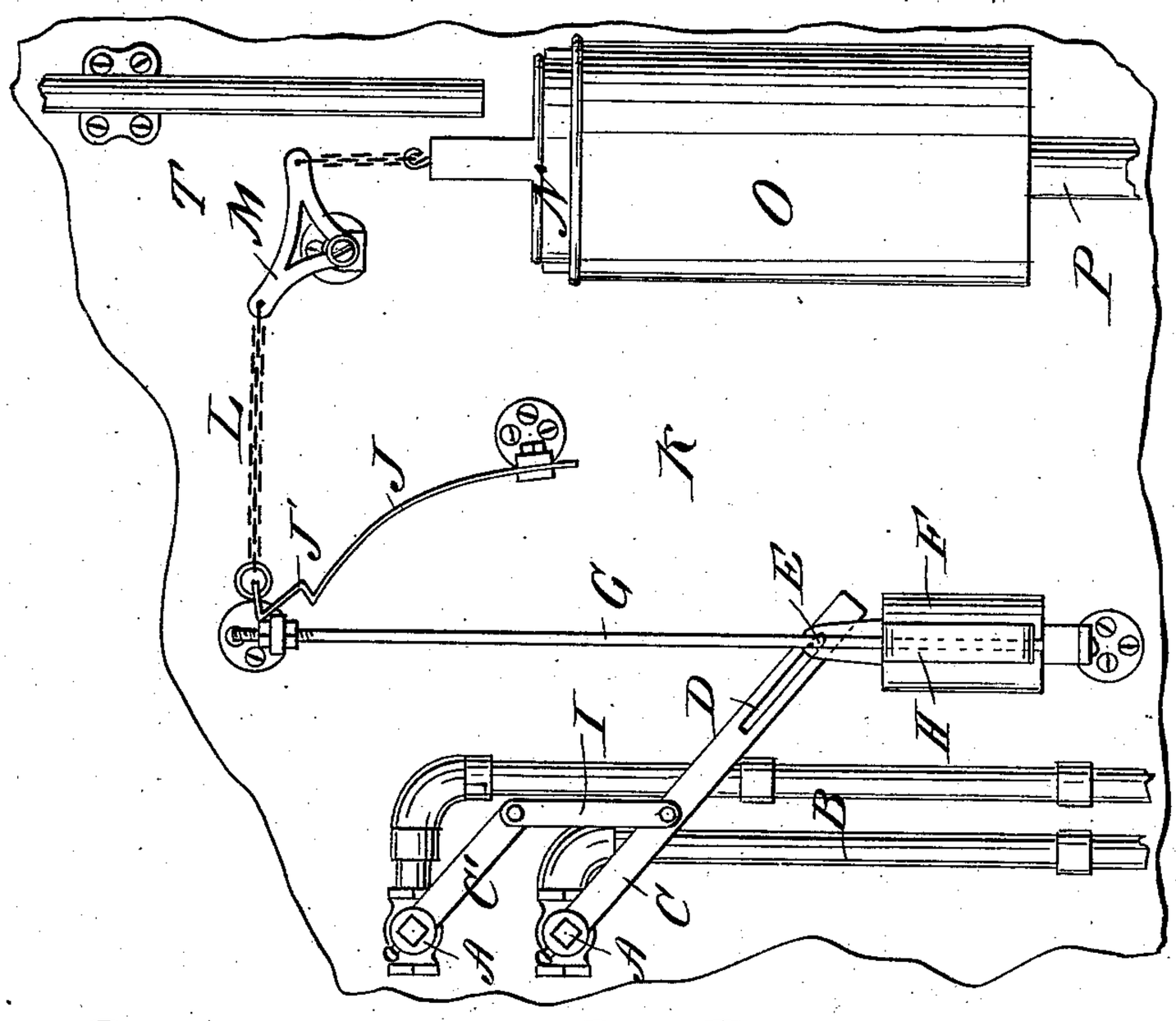
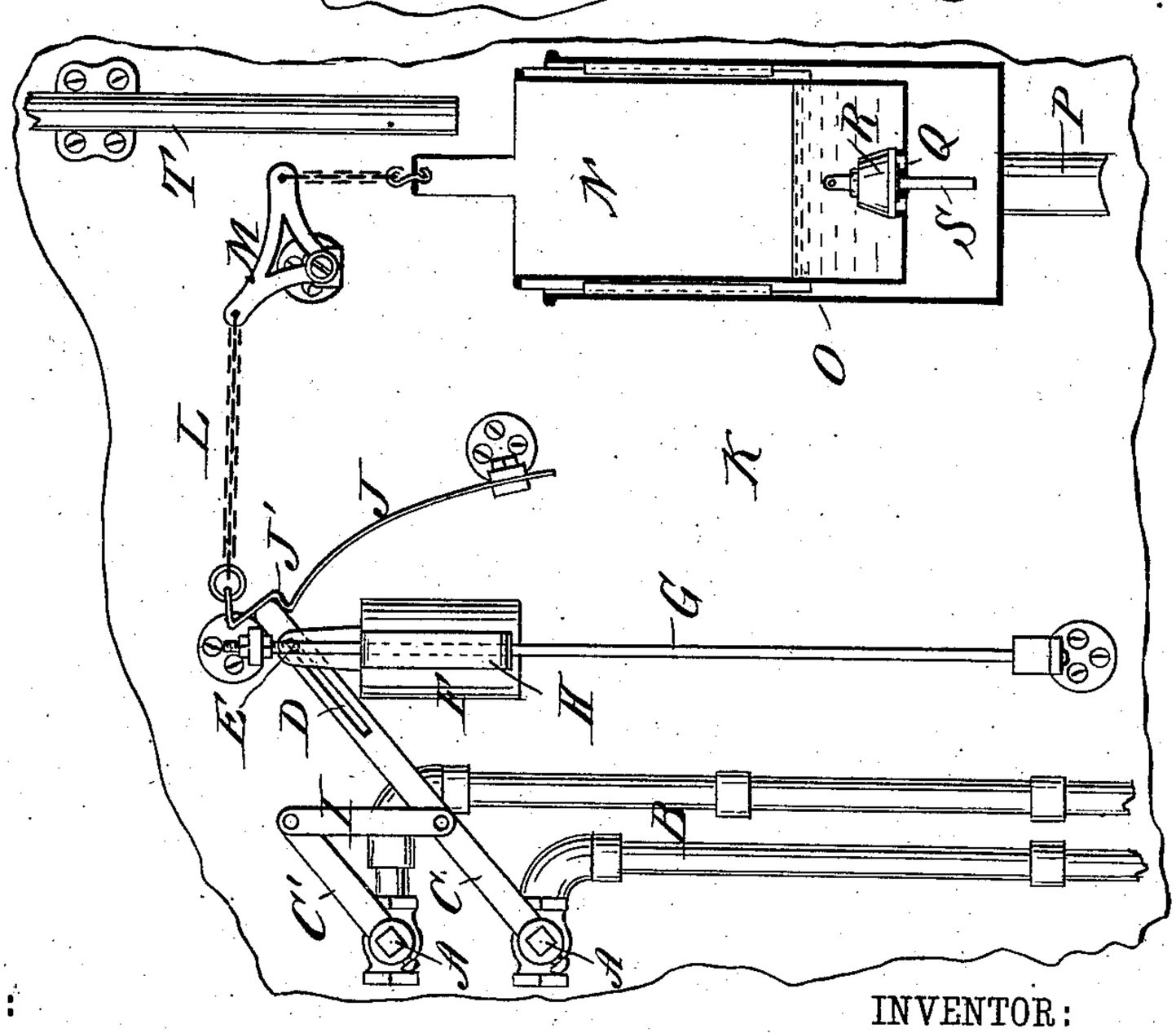


Fig. 1.



WITNESSES:

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THOMAS C. TOWNSEND, OF NEW YORK, N. Y.

AUTOMATIC DEVICE FOR STOPPING STEAM-PUMPS.

SPECIFICATION forming part of Letters Patent No. 294,529, dated March 4, 1884.

Application filed October 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. TOWNSEND, of the city, county, and State of New York, have invented a new and Improved Automatic Device for Stopping Steam-Pumps, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved cut-off for automatically shutting off the gas, steam, compressed air, or water conducted to a motor for pumping water into a tank.

The invention consists in a cock provided with a lever connected with a weight, which lever can be held raised by a spring connected with a vessel adapted to be filled from the overflow-pipe of a tank, whereby when the vessel is filled it withdraws the spring, permitting the weight to swing the lever downward, whereby the cock will be closed when the tank is filled.

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

Figure 1 is a longitudinal elevation of my improved cut-off, parts being shown in section and the gas or steam being turned on. Fig. 2 is a like view, showing the gas or steam turned off.

The cocks A of the gas-pipes B are provided with levers C and C′, of which the former is longer and is provided with a longitudinal slot, D, through which a pintle, E, passes, which projects from a weight, F, held to slide on a vertical rod, G, which weight is provided with a handle, H. The levers C C′ are connected by a link, I. A spring, J, is fixed to a board, K, and is provided at its free end with a shoulder, J′. The upper free end of the spring J is connected by a chain, L, with one end of an elbow or bell-crank lever, M, from the opposite end of which a vessel, N, is suspended, which is guided to slide in a larger vessel, O, provided with an outlet-pipe, P, at the bottom. The vessel N is provided in its bottom with an opening, Q, which is closed automatically by a weighted valve, R, provided with a downwardly-projecting stem, S. A tell-tale pipe, T, conducts water from the tank into the vessel N. The cut-off is shown combined with two gas-pipes, but can be combined with a steam, compressed-air, or water pipe.

The operation is as follows: If the pump is to be in operation, the weight F is raised and raises the lever C until the free end of the same catches on the shoulder J′ of the spring J, whereby the cock or cocks are opened and are held in this position. The pump is operated, and when the water in the tank flows over, the water flows down the tell-tale pipe T and fills the vessel N. The weight of the water causes the vessel N to descend, whereby the spring J is withdrawn from the end of the lever C. The weight F then drops and closes the cocks, thereby shutting off the gas, steam, &c. When the vessel N descends, the lower end of the stem S strikes the bottom of the vessel O and raises the valve R, and thus permits the water to flow from the vessel N.

If the machine is to be started, the weight F is raised, and thereby raises the lever C and opens the cocks, thus admitting steam or gas to the motor.

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

1. The combination, with a cock, of a lever secured to the same, a sliding weight held on the free end of the lever, a spring for holding the lever raised, and a vessel connected with the spring and adapted to be weighted by the overflow-water of a tank, substantially as herein shown and described.

2. The combination, with a cock, of the slotted lever C, the sliding weight F, provided with a pin passing into a slot of the lever C, the spring J, the elbow-lever M, the chain L, and a vessel suspended from the lever M, which vessel is adapted to be filled from the overflow-pipe of a water-tank, substantially as herein shown and described.

3. The combination, with a cock, of the slotted lever C, the sliding weight F, the spring J, having a shoulder, J′, the chain L, the elbow-lever M, the sliding vessel N, having a valve, R, in its bottom, and of the ves-

sel O, substantially as herein shown and described.

4. The combination, with a cock provided with a lever, a spring for holding it, and a weight connected with the lever, of a vessel, N, connected with the spring, the vessel O, the valve R on the bottom of the vessel N, the valve R having a stem, S, the inlet-pipe P, and the tell-tale pipe T, substantially as herein shown and described.

THOMAS C. TOWNSEND.

Witnesses:
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