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Patented Aug. 16, 1898.

L. LOSURE.

APPARATUS FOR SEPARATING NATURAL GAS FROM OIL, &c.

(Application filed June 26, 1896.)

(No Model.)

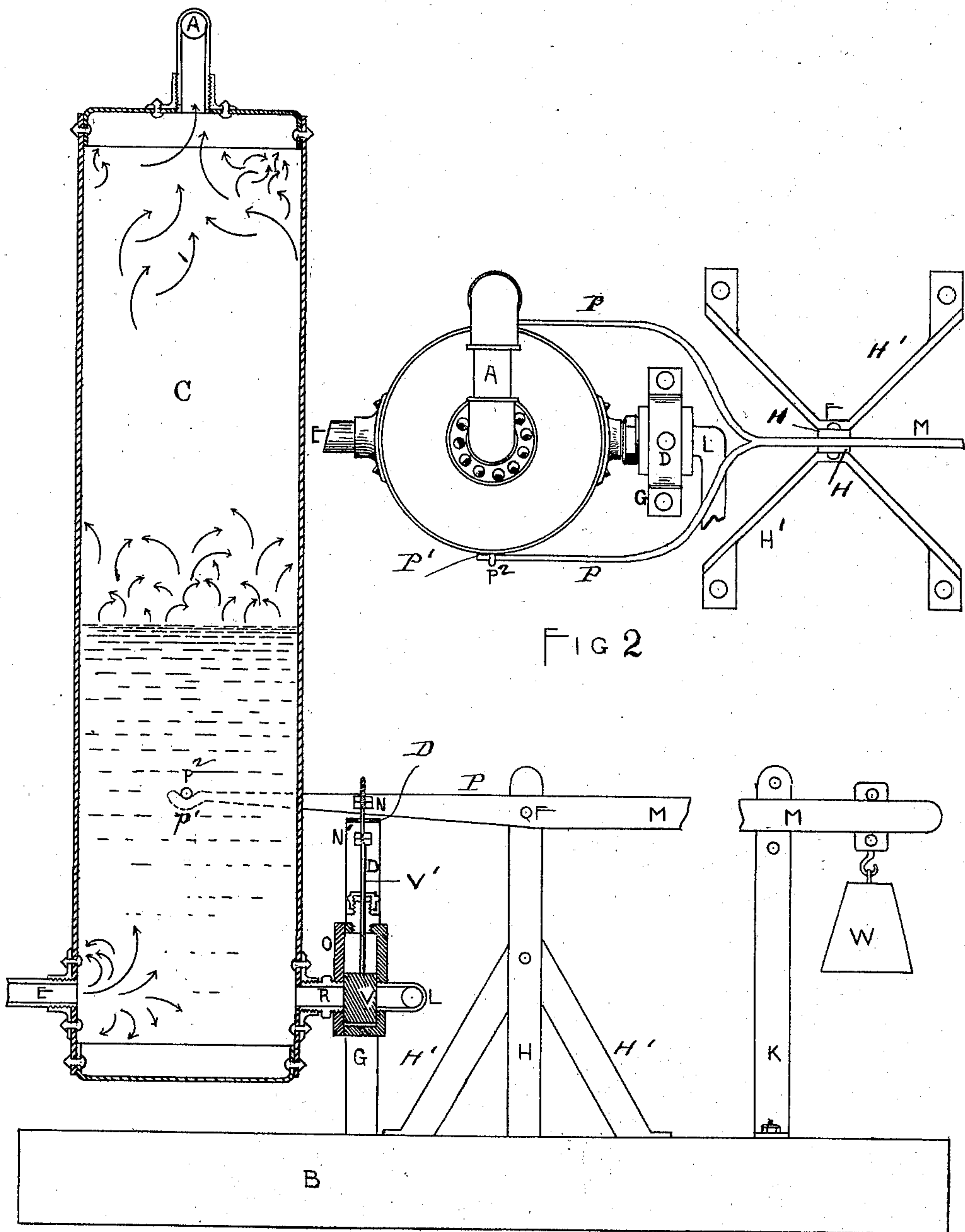


FIG. 1

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Witnesses
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UNITED STATES PATENT OFFICE.

LISANDER LOSURE, OF VAN BUREN, INDIANA.

APPARATUS FOR SEPARATING NATURAL GAS FROM OIL, &c.

SPECIFICATION forming part of Letters Patent No. 609,284, dated August 16, 1898.

Application filed June 28, 1896. Serial No. 597,091. (No model.)

To all whom it may concern:

Be it known that I, LISANDER LOSURE, a citizen of the United States, and a resident of Van Buren, in the county of Grant and State of Indiana, have invented certain new and useful Improvements in Apparatus for Separating Natural Gas from Oil and Water, of which the following is a full, clear, and exact description.

My invention relates to apparatus whereby the mixed gas, oil, and water from a natural-gas well are carried to a receptacle or tank connected with the well and provided at the upper end with a connection with a pipe-line, through which the gas escapes, means being provided whereby when the oil and water in the tank reach a predetermined level said tank will descend so as to automatically open a valve and allow a portion of the oil and water to escape, when it will rise, closing said valve until said level is again reached, when the operation is repeated. By this means none of the water or oil can escape into the pipe-line.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a gas-separating apparatus constructed in accordance with my invention. Fig. 2 is a plan view of the same.

In the said drawings the reference-letter B designates a base of any suitable form and material provided with standards H, braced by means of the inclined braces H'. Pivoted to the upper ends of these standards is a beam M, provided with bifurcated arms P, and at the opposite end provided with an adjustable weight W. The outer ends of the arms P are formed with hooks or curved bearings P', with which engage trunnions P², secured to a tank C. The lower end of this tank is connected by a pipe E to a natural-gas well, while the upper end is provided with a pipe A, connected with a pipe-line. Opposite the pipe E is an escape-pipe R, which communicates with a vertically-movable

valve-casing O, within which is located a vertically-movable valve V, the stem V' of which passes through the connecting-piece D of two uprights G, secured to the base B. This stem, which is screw-threaded at the upper end, is provided with two nuts N N'.

L is an escape-pipe connected with the valve-casing O.

The operation is as follows: The mixed gas, water, and oil will enter the tank through the pipe E, when the gas will escape through the connection A to the pipe-line, the oil and water remaining in the tank. When the oil and water reach a predetermined level or a height sufficient to overcome the valve W, the tank will descend, the beam turning on its pivots. The valve-casing O will descend with the tank until the pipe R passes the lower end of the valve V, when the oil and water will rush out of the said pipe and by their pressure elevate the valve to its full height, allowing the water and oil to escape through pipe L. When sufficient oil and water have escaped, the weight will elevate the tank and close the valve. The nut N' limits the upward movement of the valve, while nut N, which is movable, is for regulating the stroke thereof.

Having thus fully described my invention, what I claim is—

In a gas-separating apparatus, the combination with the tank having an inlet-pipe at the lower end and an escape-opening, the opposite trunnions, the pivoted beam and the weight, of the escape-pipe at the lower end of said tank, the vertically-movable valve-casing connected therewith, the vertically-movable valve located therein, the valve-stem, the nuts thereon and the cross-piece through which said stem passes, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

LISANDER LOSURE.

Witnesses:

JOHN SAXON,
DUDLEY C. BOXELL.