

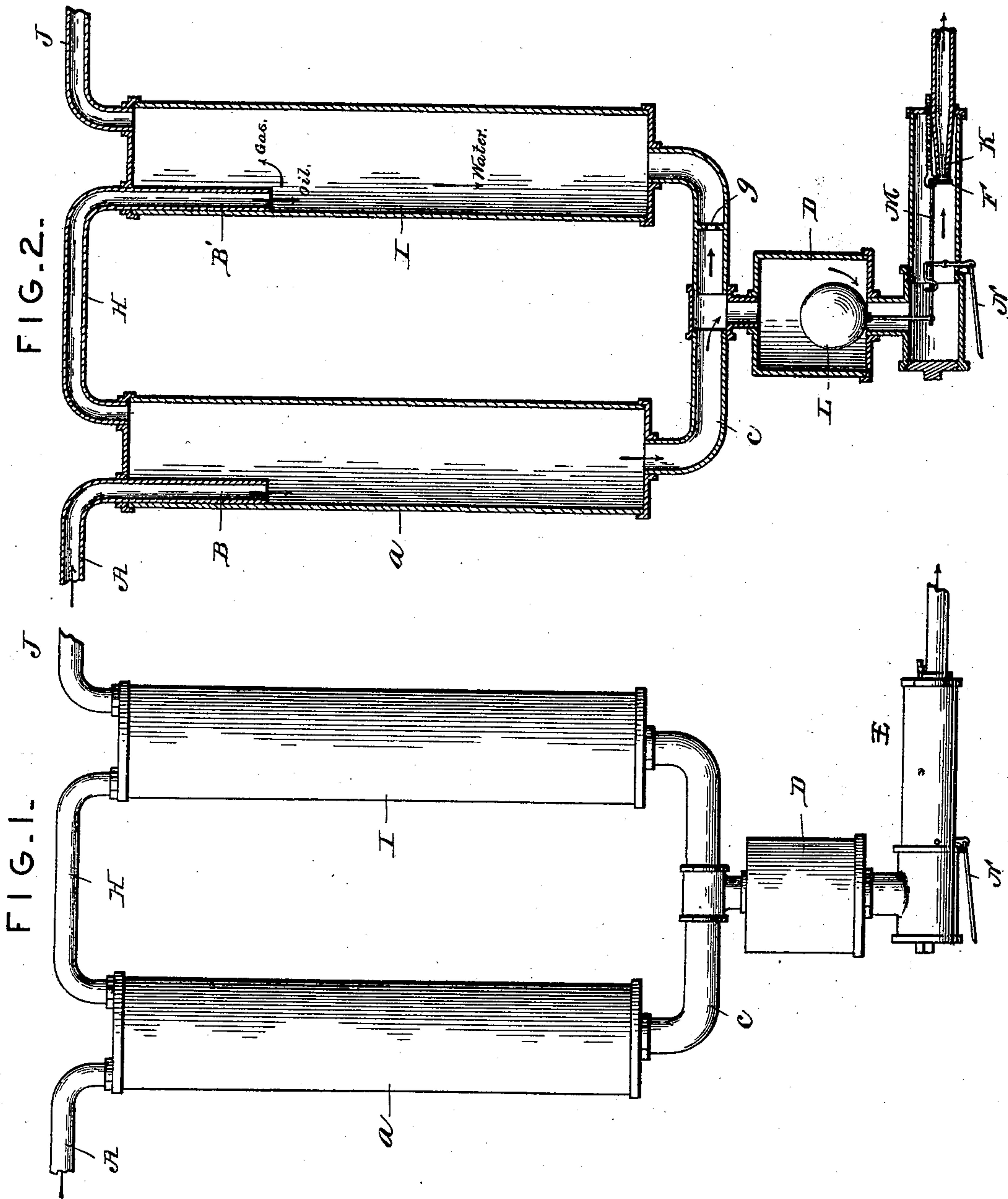
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Patented Dec. 17, 1901.

C. NEWBOLD & A. LOWRY.
DEVICE FOR SEPARATING GAS FROM WATER AND OIL.

(Application filed Mar. 12, 1901.)

(No Model.)



ATTEST-

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UNITED STATES PATENT OFFICE.

CLARENCE NEWBOLD AND ALBERT LOWRY, OF ELWOOD, INDIANA; SAID
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DEVICE FOR SEPARATING GAS FROM WATER AND OIL.

SPECIFICATION forming part of Letters Patent No. 689,366, dated December 17, 1901.

Application filed March 12, 1901. Serial No. 50,794. (No model.)

To all whom it may concern:

Be it known that we, CLARENCE NEWBOLD and ALBERT LOWRY, citizens of the United States, and residents of Elwood, in the county of Madison and State of Indiana, have made a certain new and useful Invention in Devices for Separating Gas from Water and Oil; and we declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a front elevation of our device. Fig. 2 is a central vertical section of the same.

The invention relates to means for separating gas from water and oil as they come from the oil-well; and it consists in the novel construction and combinations of devices, as hereinafter set forth.

In the accompanying drawings the letter A designates the inlet-pipe, which is connected to the pipe running from the well. This inlet-pipe extends downward, as at B, a short distance (about eighteen inches, more or less) into the large receiver-pipe or tubular chamber *a*, into which the oil, water, and gas are discharged, the water falling to the bottom, the oil also falling, and the gas rising and passing into the second tubular chamber or receiver I by the pipe H, which connects the tops of the two receivers *a* and I, and out through the pipe J, which projects from the upper portion or top of the receiver I, which is about equal in size to the receiver *a* and parallel therewith. The lower portions or bottoms of the receivers *a* and I are connected by the pipe *c*, which is also connected to the drum D below, into which the bulk of the water and oil is carried down. The drum is provided with a float L, to which is connected a lever M.

Below the drum D is a pipe E, which is connected to the bottom of the drum. This pipe receives the water and oil from said drum and serves to let the water and oil pass off, in accordance with the action of the valve F,

which is designed to act automatically in closing the exit-opening.

In the connecting-pipe *c* is arranged a partition in the arm on the side of the receiver I, and in this partition is made a small opening *g*, which is designed to permit the downward passage of the condensation in the receiver I.

The pipe H, connecting the tops of the two receivers *a* and I, serves to conduct the gas and mist or vapor by its downward bend or extension B' into receiver I, wherein the vapor or mist condenses and falls, the gas rising and flowing out by the pipe J.

The float L in the drum D is preferably made of aluminium, and to it a rod is connected which extends downward and is attached to an arm of the lever M in the pipe E, the other arm of said lever being connected to a valve F at the exit portion of said pipe, this valve being opened when the float rises and closed when the float falls.

K indicates the valve-seat.

A small crank device or lifting-wire is provided at N, whereby the lever M can be operated by hand when necessary.

The operation is as follows: The mingled gas, oil, and water flowing in by the pipe A passes down by the bend B and into the receiver *a*, where the main separation by gravity takes place, the gas and vapor rising and passing through the pipe H into the second or gas receiver I and the water and oil flowing down into the drum D and out in an intermittent manner, regulated by the float L, lever M, and valve F. A second separation takes place in the condensing-receiver I, the gas rising and passing off through the pipe J and the condensation falling and passing off intermittently through the drum D.

Having described this invention, what we claim, and desire to secure by Letters Patent, is—

1. In a separator for gas, water and oil, the combination with the two receivers having inlet and outlet pipes, of the connection at the top of said receivers, and the connection at the bottom of said receivers, the receiving-drum connected to the latter, its con-

tained float, the exit-pipe, its valve and lever connection attached to said float, substantially as specified.

2. In a separator for gas, water and oil,
5 the combination with a first or gravity separating-receiver having an inlet-pipe, and a second or condensing and separating receiver having an outlet-pipe, of the upper connecting-pipe, having a downward extension into
10 the condensing-receiver, the lower connecting-pipe, its small passage in the arm on the

side of the condensing-receiver, the drum and float, exit-pipe, lever and valve, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CLARENCE NEWBOLD.
ALBERT LOWRY.

Witnesses:

J. H. BROOKINS,
J. A. BROOKINS.