

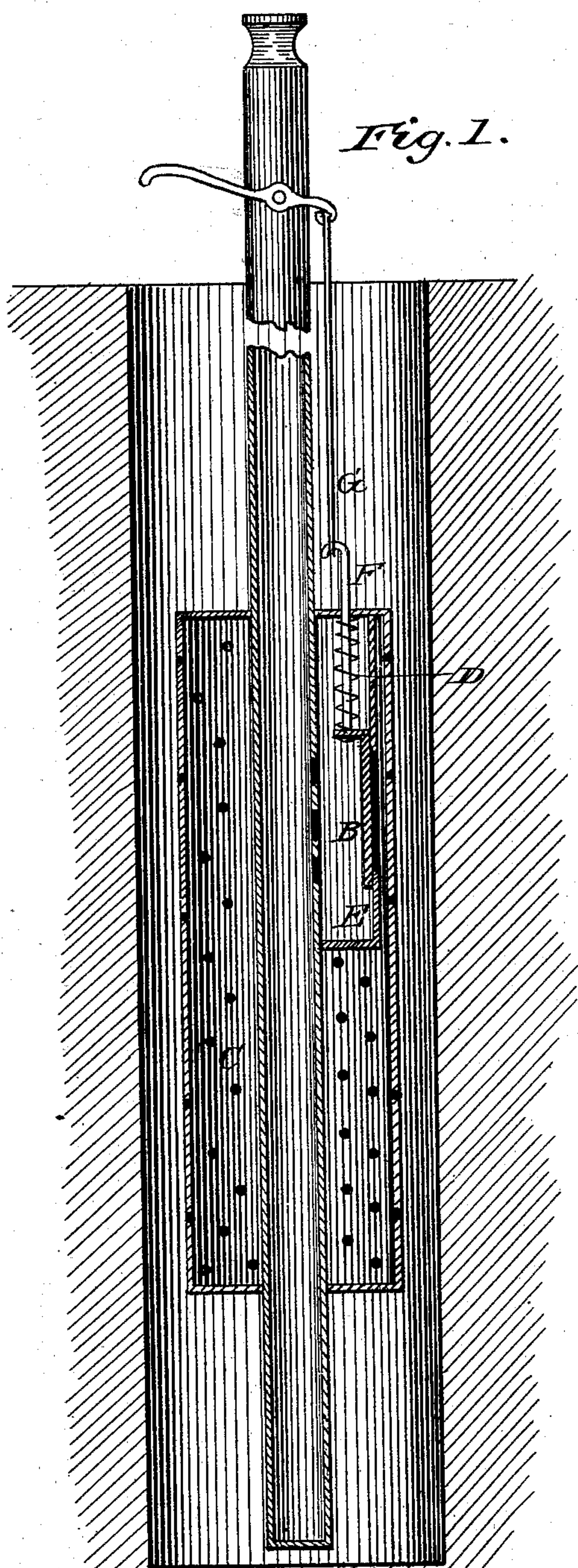
(No Model.)

W. E. KARNES.

APPARATUS FOR CLEANING OIL WELLS.

No. 282,531.

Patented Aug. 7, 1883.



WITNESSES:

Ed. L. Dietrich
Arthur L. Morrell

Fig. 2.

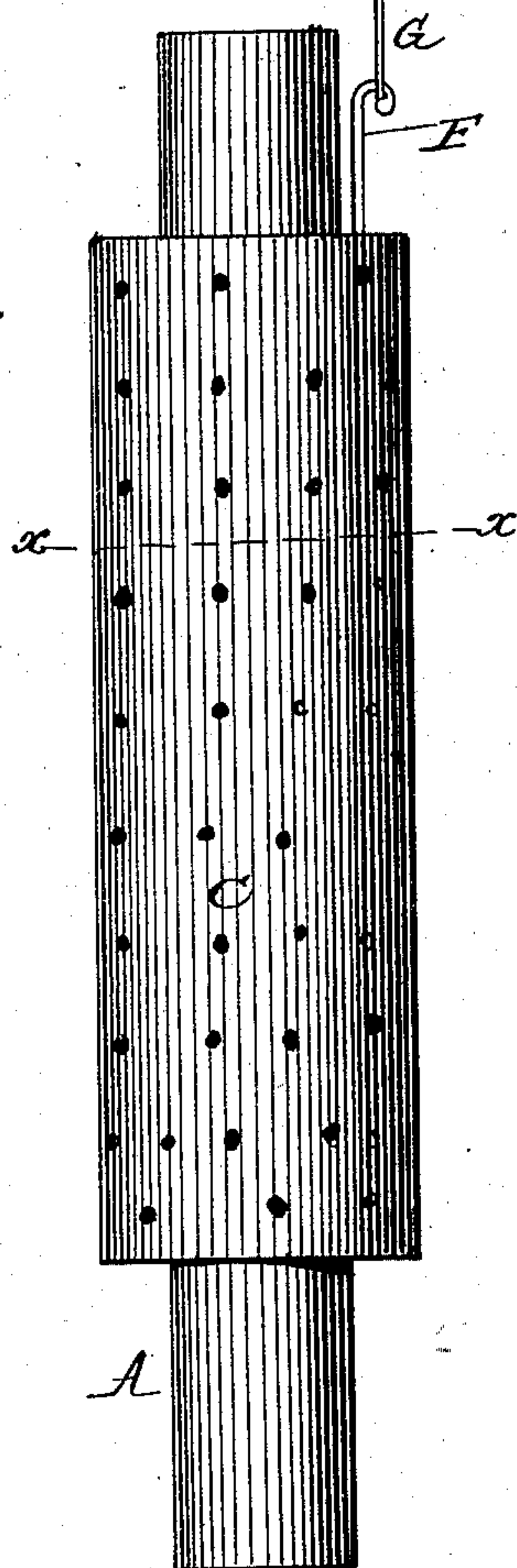
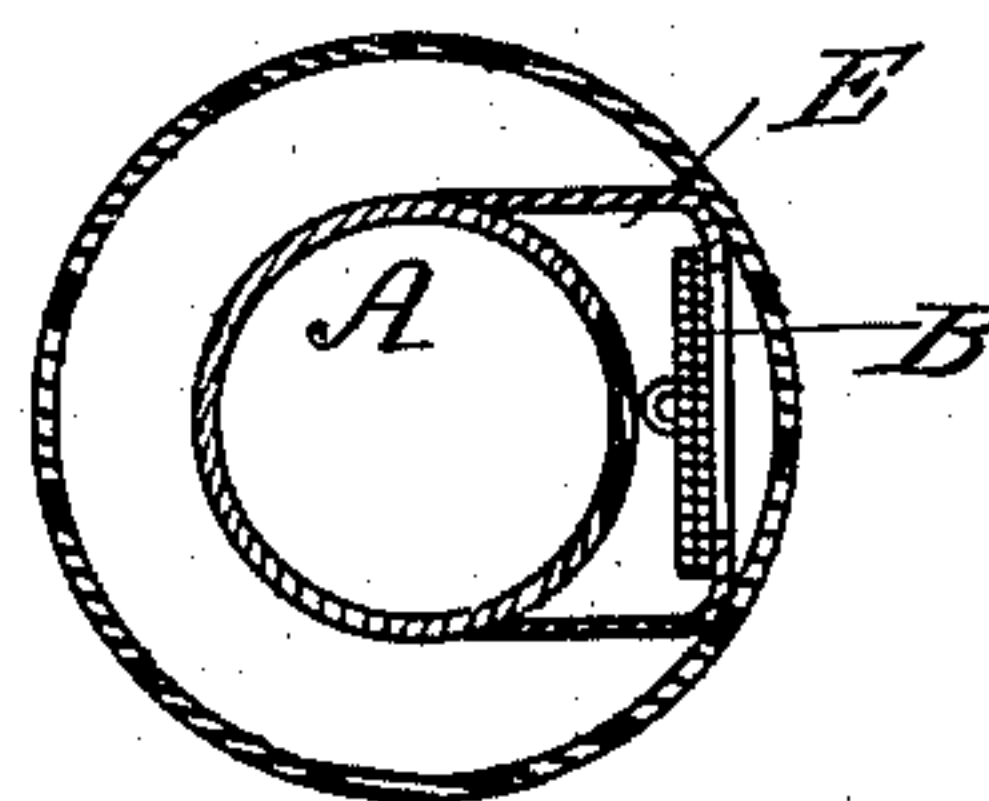


Fig. 3.



William E. Karnes.
INVENTOR.

By Louis Bagger & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM E. KARNS, OF PARKER'S LANDING, PENNSYLVANIA.

APPARATUS FOR CLEANING OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 282,531, dated August 7, 1883.

Application filed May 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. KARNS, of Parker's Landing, in the county of Armstrong and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Cleaning Oil-Wells; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a vertical section of an oil-well, showing my apparatus in operative position. Fig. 2 is a side view of the apparatus; and Fig. 3 is a cross-section on line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to an apparatus for cleaning oil-wells; and it consists in the detailed construction of the same, as herein-after more fully described and claimed.

In the accompanying drawings, A represents a length of pipe or tubing such as is ordinarily used in oil-wells, one side of which is perforated with one or more openings, which are covered by the valve B. The valve B works in the valve-box E, inside of which is a coiled spring, D, which serves to automatically close the valve. A perforated casing, C, surrounds the tubing at the point where the valve-box is affixed to it, and extends below the valve-box to any desired distance, the said perforated casing being closed at both ends, and connected at its upper end to the top of the valve-box E and at its lower end to the tubing A. A cord or wire, G, is fastened to the valve-stem F, and extends to the top of the well.

The operation of my improved well-cleaning apparatus is as follows: When it is desired to clean the oil-bearing strata of rock of the dirt or paraffine which has accumulated thereon, the operator pulls the wire or cord which is connected to the valve-stem, thus opening the valve. The oil in the lower length of tubing, (to which length my apparatus is affixed,)

under the pressure of the column of oil in the tubing above it, will rush through the perforations in the tubing and the opening in the valve-box into the space between the tubing and the perforated casing, and from there the oil rushes out with great force through the openings or perforations in the casing against the rock or walls of the well, thereby effectually cleaning them of the accumulated dirt or paraffine. When the operator is satisfied that the oil-bearing strata has been washed thoroughly clean, he slackens the cord or wire at the top, when the valve automatically closes and the well can be worked as usual.

It will be seen that by causing the oil to pass through the perforated casing C, I distribute the pressure equally around the walls of the well, and thereby succeed in easily and rapidly cleaning the oil-bearing strata.

From the foregoing description, taken in connection with the drawings hereto attached, the operation of my improved apparatus for cleaning oil-wells will readily be understood, without requiring extended explanation.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In an apparatus for cleaning oil-wells, the perforated tube-section, in combination with a spring-actuated valve closing the perforations, and means for operating the same, substantially as and for the purpose shown and set forth.

2. In an apparatus for cleaning oil-wells, the combination of the perforated tube-section, the spring-actuated valve, means for operating said valve from the top of the well, and perforated jacket or casing inclosing the perforated tube-section and its valve, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

WILLIAM E. KARNS.

Witnesses:

P. BRACKER,
B. M. PALMER.