

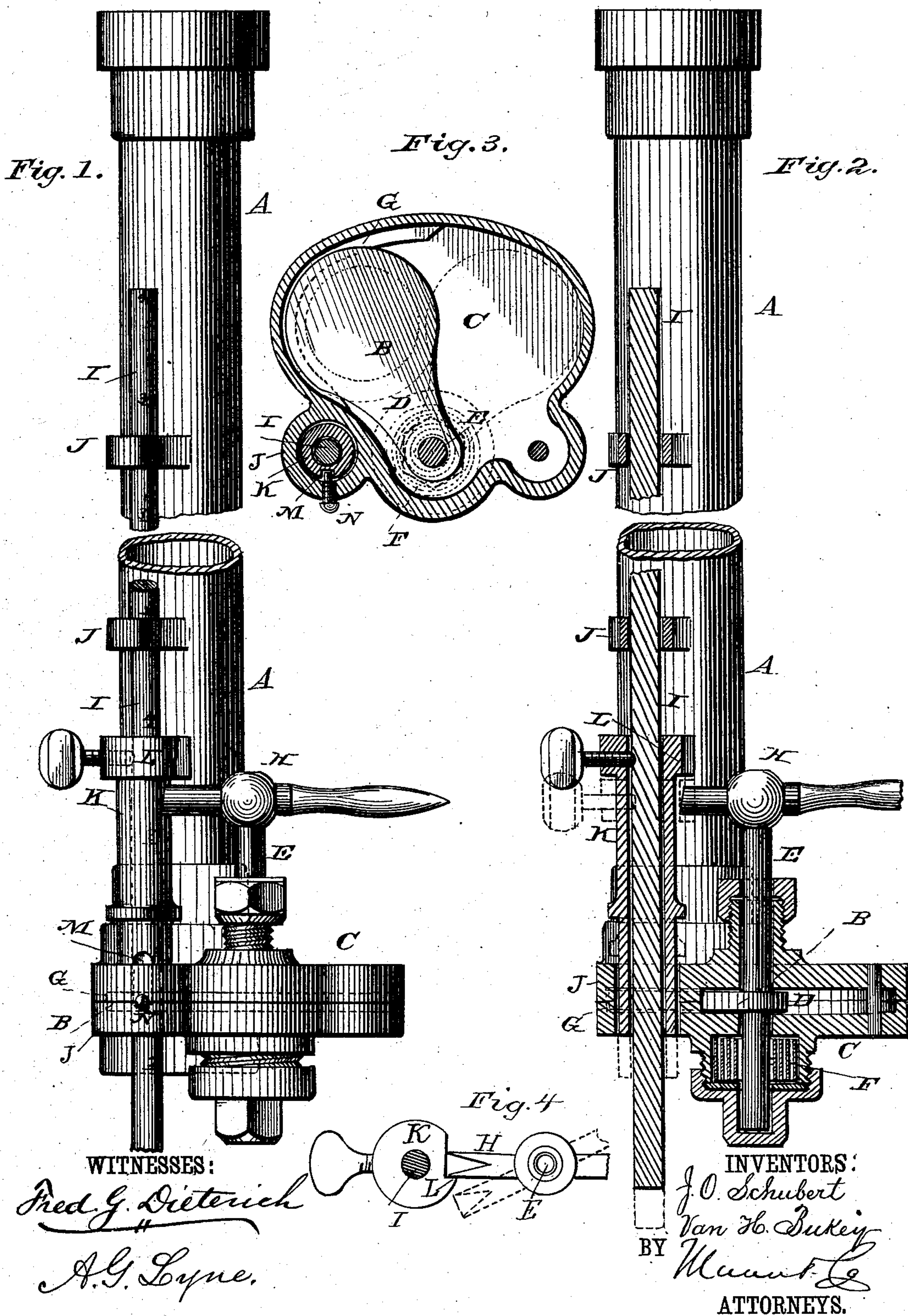
(No Model.)

J. O. SCHUBERT & VAN H. BUKEY.

LIQUID TESTER.

No. 290,935.

Patented Dec. 25, 1883.



UNITED STATES PATENT OFFICE.

JULIUS OTTO SCHUBERT AND VAN HARTNESS BUKEY, OF PARKERSBURG,
WEST VIRGINIA.

LIQUID-TESTER.

SPECIFICATION forming part of Letters Patent No. 290,935, dated December 25, 1883.

Application filed May 18, 1883. (No model.)

To all whom it may concern:

Be it known that we, JULIUS O. SCHUBERT and VAN H. BUKEY, both of Parkersburg, in the county of Wood and State of West Virginia, have invented a new and useful Improvement in Liquid-Testers, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

10 This invention relates to an improved liquid-tester or "thief," for taking a fair sample of the oil or other liquid contained in any receptacle.

15 In the drawings, Figure 1 is a side elevation of our improved tester, partly broken away. Fig. 2 is a sectional view, partly broken away. Fig. 3 is a horizontal section of the same, and Fig. 4 is a detail plan view.

20 The natural oils form with water an emulsion which has a yellowish appearance. They also contain more or less of impurities, which are generally of an earthy matter and have a brown yellowish color. By standing in a tank, the impurities and the emulsion, being heavier than pure oil, sink toward the bottom and gradually assume a relative order, which is indicated by the different shades of color shown by a vertical section through the oil in the tank. These shades vary from a fresh green to a yellow and yellowish brown, according to the amount of impurities retained by the oil at the various depths in the tank. It is therefore of the greatest importance in taking out an average sample of the oil in the tank not to agitate the oil, but to cut out a column of the oil without disturbing the different layers represented by the different shades of color. We have accordingly devised a tester or thief in which we employ a metallic or glass tube, A, which is open at both ends, and provided with a transverse valve, B, which is accommodated in a suitable chamber, C, at one side of the tube, when not in position for closing the lower end of the latter. The tube is to be of any desired length, or formed in jointed sections to adapt it for tanks of different depths. The chamber of the tube is to be of the same diameter throughout its length, in order that the oil or other liquid may pass into it, when it is sunk in a tank without being agitated.

The valve B is a disk connected by means of an arm, D, to a vertical rod, E, which is

provided with a spiral spring, F, for holding it normally in a position for allowing the valve to close the tube. The tube is provided with an annular recess, G, for receiving the edges of the valve to form a tight joint. The rod E, at its upper and outer end, is provided with a lever, H, by which it may be turned to move the valve from the chamber of the tube back into the chamber C, which extends horizontally from the tube. To hold the valve in the chamber C against the tension of the spring F, a vertically-sliding rod, I, is arranged in guides J on the outer surface of the tube, and provided with an adjustable stop, K, consisting of a sleeve secured thereon by a screw, and having a shoulder, L, with which one end of the lever H is adapted to engage. The shoulder is so formed that it may be disengaged from the lever by a vertical movement of the rod I, which is accomplished by pressing the lower end of the rod against the bottom of the tank. By adjusting the stop or sleeve K nearer to or farther from the lower end of the rod I, and then allowing the latter to drop downward by gravity until arrested by the stop, the device may be adapted for closing on and taking up the oil at any desired distance from the bottom of the tank. When an entire column of liquid in a tank is to be taken, the stop must be adjusted near the lower end of the rod I, so that the lower end of the tube shall reach to or nearly to the bottom of the tank before the rod and valve are operated. In order that the rod I shall be moved only to a sufficient extent for releasing the lever, the stop K is provided with a longitudinal groove, M, with which a screw, N, in the guide J engages to limit the action of the said rod when pressed against the bottom of the tank. The rod I may be graduated to assist in setting it for any required depth.

What we claim is—

The combination of the tube, the valve-disk, the spring-retained rod E, carrying the disk, and the vertically-acting trip-rod I, having an adjustable stop adapted to engage a lever on the rod E, substantially as and for the purpose set forth.

JULIUS OTTO SCHUBERT.
VAN H. BUKEY.

Witnesses:

C. D. MERRICK,
M. C. C. CHURCH.