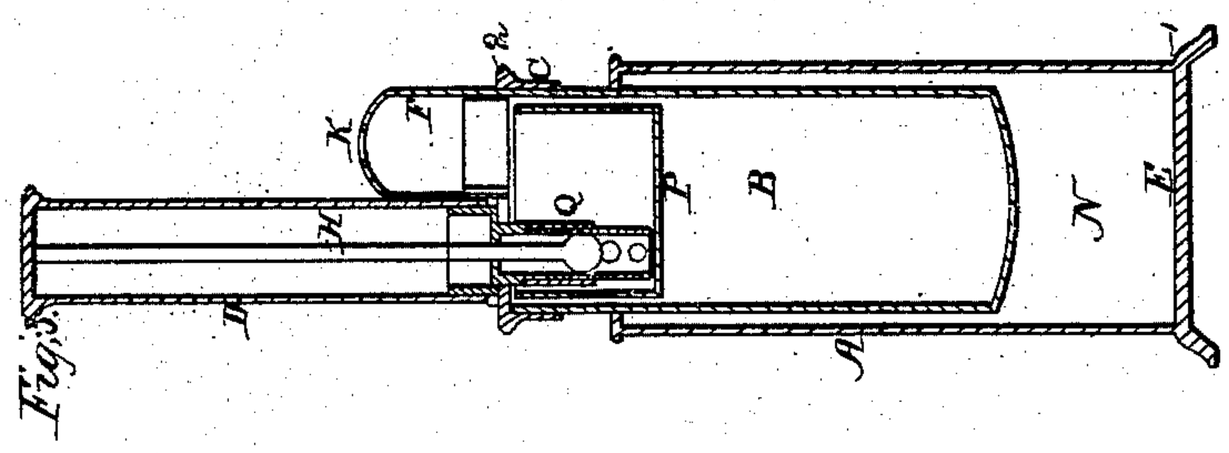
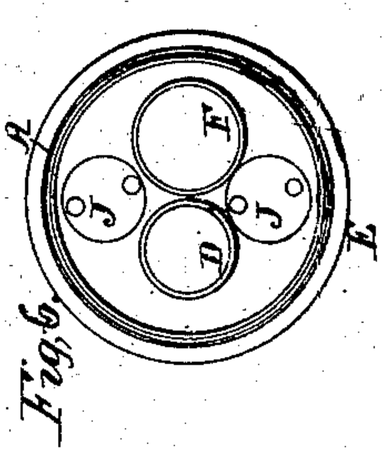
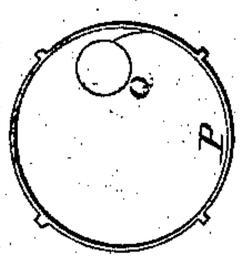
G. Taglialue.

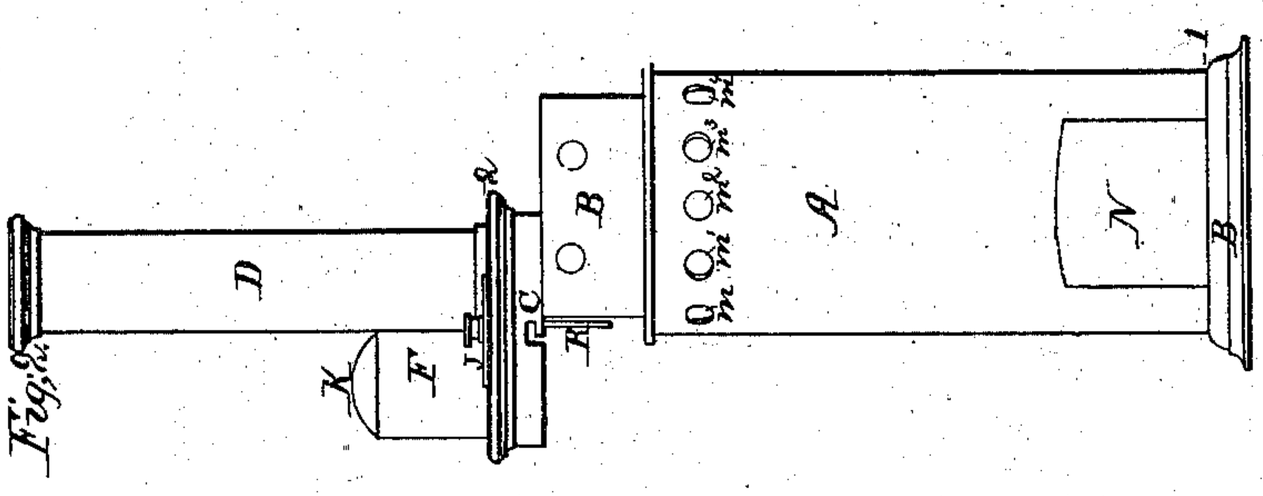
Testing Coal Oil.

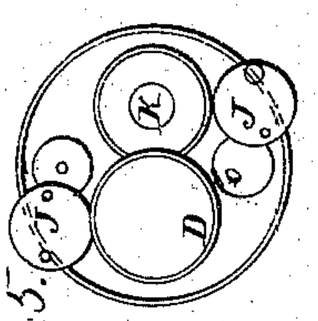
No. 36,826. Patented Oct. 28, 1862.

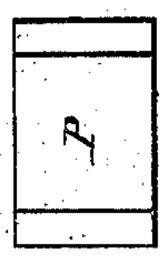


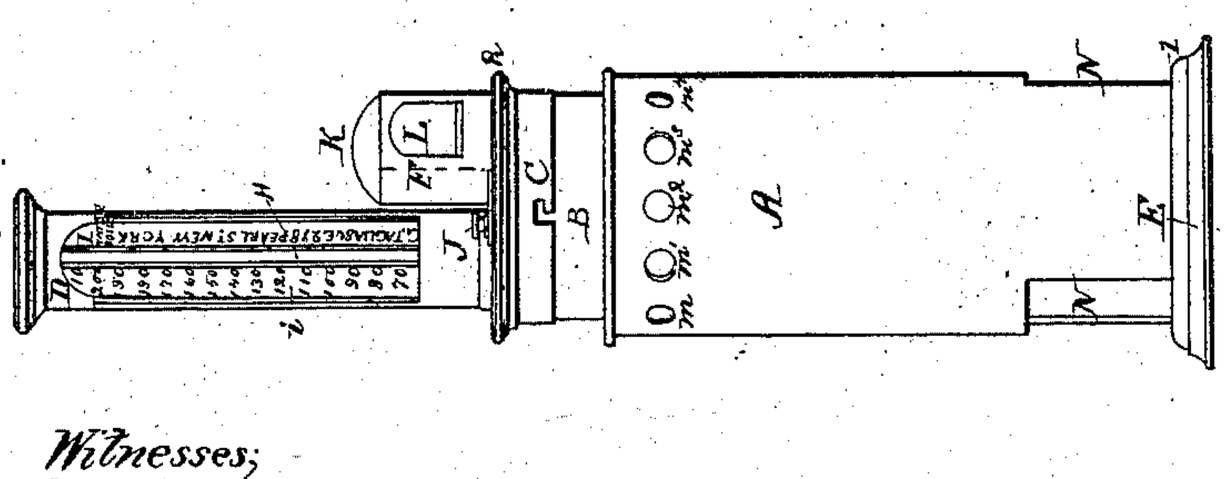


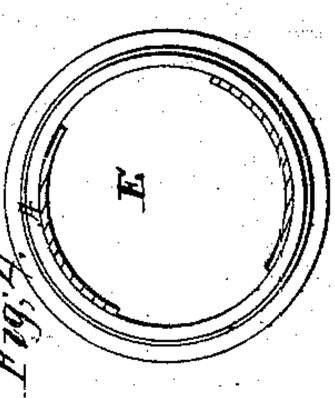












Witnesses;
Charles Klein
George Martin

Inventor;
Giuseppe Taglialue

UNITED STATES PATENT OFFICE.

GIUSEPPE TAGLIABUE, OF NEW YORK, N. Y.

IMPROVED APPARATUS FOR TESTING COAL-OIL.

Specification forming part of Letters Patent No. **36,826,** dated October 28, 1862.

To all whom it may concern:

Be it known that I, GIUSEPPE TAGLIABUE, of New York, in the county of New York and State of New York, have invented an Improved Apparatus for Testing Coal-Oil.

The following is a description of my apparatus, with drawings annexed, and lettered from A to R.

Referring to the drawings, Figure 1 is a front view of my apparatus ready for trying the igniting of the gas from coal-oils. Fig. 2 is a rear view with the cover open for trying the igniting of the oil. Fig. 3 is a sectional view of the whole instrument. Fig. 4 is a sectional view of the base at E 1 1 1. Fig. 5 is a top view at 2 2 2. Fig. 6 is a sectional view at 2 2 2.

The views between Figs. 1 and 2 and between Figs. 2 and 3 are drawings of the cup, hereinafter described.

The whole instrument is constructed of brass or any suitable material, with the exception of the thermometer, which is of course a glass tube.

A is a hollow stand resting on the base E, with openings N N for the purpose of placing therein a lamp, and some small openings, M' M^2 M^3, near the top to let out gases produced by the burning of the lamp.

B is a vessel for holding water—and, if need be, coal-oil and water—attached to the stand A, extending above the stand and down into the stand, with a space between it and the stand to allow the heat of the lamp to circulate around the vessel B.

C is a cover for the vessel B.

D is a tube attached to the cover C, extending above and below the cover C, with an opening in the side above the cover C to display the thermometer-scale H, the glass tube of the thermometer extending through the cover and within the perforated tube D into the cup P.

F is a dome or cap covering an aperture in the cover C, with an opening, L, in front and an opening, K, in the top. The front opening, L, is for inserting a flame of paper or wood, and the opening K is for the escape of the gases produced by the combustion, so as not to put out the flame.

O O are openings in the cover C for the admission of air when needed, the air being excluded by the rotating covers J J when necessary.

P is a cup for holding the coal-oil when testing its inflammability and also the temperature at which the gas explodes. Within the cup P is a ring, Q, into which the tube D of the thermometer is inserted. The ring Q is elastic, so as to adhere to the tube D, so that the cup P may be lifted out of the vessel B. The cup P is smaller than the vessel B; but there are projections on the side of the cup P, which keep the cup P steady in the vessel B, but allow the water which may be in the vessel B to flow up and around the cup P. There are holes in the vessel B, near the top, to let any excess of water flow out of the vessel B, and not to allow any of it to run into the cup P. The ring Q is also to allow the cover C to be placed otherwise than over the vessel B, and at the same time hold it steady in any desired position. The cup P is for testing a small quantity of coal-oil. If it is desirable to test a larger quantity than the cup P holds, the vessel B may be filled one-third full of water, and then filled with oil on top of the water. In this case the cover C may be held in the position shown in Fig. 2 by a small spring, R, Fig. 2. The spring, coming outside the vessel B, presses the perforated tube D against the inside of the vessel B, and holding the cover C and its appendages in the position shown in Fig. 2.

The manner of using the instrument is as follows: Water is put in the vessel B and a lighted lamp under the vessel B in the opening N of the stand A. The coal-oil to be tested is put in the cup P, and placed in the vessel B, and covered by the cover C, with the openings O O open. When the temperature of the oil is 100° Fahrenheit, a lighted paper is held in the opening L of the dome F, and when the vapor ignites the temperature is to be noted. To try the temperature at which the oil ignites, the cover is placed on one side of the vessel B, leaving the vessel B partly uncovered, as shown in Fig. 2, so that the lighted paper may touch the oil. If, after testing a sample or two of oil, the cover C should become heated, so as to interfere with any further trials, the cover C and its appendages may

cover C and its appendages upright in any position other than over the vessel B.

4. The perforated tube D, that surrounds the

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