

The bath rests upon a tripod stand, to the ring of which is attached a copper cylinder or jacket (24 B.W.G.) flanged at the top, and of such dimensions that the bath, while firmly resting on the ring, just touches with its projecting top the inward-turned flange. The diameter of this outer jacket is six and one-half inches. One of the three legs of the stand serves as support for the spirit lamp attached to it by means of a small swing bracket. The distance of the wick holder from the bottom of the bath is one inch.

Two thermometers are provided with the apparatus, the one for ascertaining the temperature of the bath, the other for determining the flashing point. The thermometer for ascertaining the temperature of the water has a long bulb and a space at the top. The scale (in degrees of Fahrenheit) is marked on the tube. It is fitted with a metal collar, fitting the socket, and the part of the tube below the collar should have a length of about three and one-half inches measured from the collar to the end of the bulb. The thermometer for ascertaining the temperature of the oil is fitted with collar and the scale is cut on the tube in a similar manner to the one described. It measures from end of the collar to end of bulb two and one-quarter inches.

NOTE.—A model apparatus is deposited at the Weights and Measures branch of the Inland Revenue Department.

Directions for Applying the Flashing Test.

1. The test apparatus is to be placed for use in a position where it is not exposed to currents of air or draughts.

2. The heating vessel or water bath is filled by pouring water into the funnel until it begins to flow out at the spout of the vessel. The temperature of the water at the commencement of the test is to be one hundred and forty degrees Fahrenheit, and this is attained in the first instance either by mixing hot and cold water in the bath, or in a vessel from which the bath is filled, until the thermometer which is provided for testing the temperature of the water gives the proper indication; or by heating the water with the spirit lamp (which is attached to the stand of the apparatus) until the required temperature is indicated.

If the water has been heated too highly, it is easily reduced to one hundred and forty degrees by pouring in cold water little by little (to replace a portion of the warm water) until the thermometer gives the proper reading.

When a test has been completed, this water bath is again raised to one hundred and forty degrees by placing the lamp underneath, and the result is readily obtained while the petroleum cup is being emptied, cooled, and refilled with a fresh sample to be tested. The lamp is then turned on its swivel from under the apparatus, and the next test is proceeded with.

3. The test lamp is prepared for use by fitting it with a piece of flat plaited candle wick, and filling it with colza or rape or fine sperm oil up to the lower edge of the opening of the spout or wick tube. The lamp is trimmed so that when lighted it gives a flame of about fifteen hundredths of an inch in diameter, and this size of flame which is represented by the projecting white bead on the cover of the oil cup is readily maintained by simple manipulation from time to time with a small wire trimmer.

When gas is available it may be conveniently used in place of the little oil lamp, and for this purpose a test-flame arrangement for use with gas may be substituted.