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PATENT SPECIFICATION

Application Date: Aug. 27, 1921. No. 22,734/21. **189,235**

Complete Accepted: Nov. 27, 1922.

COMPLETE SPECIFICATION.

Improvements in Liquid Level Indicators.

I, GEORGE CONSTANTINESCO, of Carmen Sylva, Beechwood Avenue, Oatlands Park, Weybridge, in the County of Surrey, a subject of the King of Great Britain and Ireland, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to liquid level indicators of the type in which the pressure in an air pocket at or near the bottom of the tank is communicated to liquid in a gauge tube so that the height of the liquid standing in the gauge tube indicates the depth of the liquid in the tank.

The objects of the invention are to produce a simple and convenient fitting readily attachable to existing tanks providing an air pocket in a convenient form; and to arrange the apparatus in such a manner that the zero of the gauge can be readily brought to a position in which it is visible, by suitably positioning the air pocket relatively to the bottom of the tank.

The invention consists in a fitting comprising an air pocket for the purpose described and a connection for attachment to a gauge capable of being screwed, or otherwise attached, into the existing outlet flange or connection provided at or near the bottom of a tank for the outlet nipple, and capable of carrying the usual outlet nipple at its lower end for connecting the supply pipe.

The invention also consists in the improved device for applying a liquid level indicating gauge to a petrol tank for motor car or aeroplane hereinafter described.

Referring to the accompanying drawings:—

Fig. 1 shews diagrammatically the general arrangement of a petrol tank and gauge suitable for a motor car with the improved fitting attached.

Fig. 2 is a sectional drawing of details of the air pocket and its connections.

In the form of the invention illustrated the bottom *a* of the petrol tank has attached to it by brazing or otherwise the usual outlet connector *b*. The fitting for the purpose of this invention comprises a pipe *c* having lateral apertures near its lower end, this pipe being screwed into the connector *b*. Surrounding the pipe *c* there is provided a sleeve *d* having screwed into it at one side a nipple *f* locked by a nut *g*, the sleeve being gripped between fibre washers *k k* by a hexagonal nut *e*. The ordinary nipple *h* by which the petrol connection is attached is screwed into the hexagonal nut *e*—the nipple *f* is connected by a suitable pipe *l* with the air chamber of a gauge *m* of the type described in Specification No. 16,134, 185,840, or No. 189,234.

The operation of the above described arrangement is as follows:—

Initially the pocket within the sleeve *d* contains petrol which runs into it from the tank through the pipe *c* and the lateral openings near the bottom of this pipe.

On pressing the button in the gauge air is forced through the connector *f* into the air pocket forcing down the petrol in the annular chamber within the sleeve, until the petrol level reaches the lateral apertures in the pipe *c*. When the petrol reaches the sleeve the excess air bubbles up through the tank and on releasing the button the liquid level in the gauge remains constant, the height of the column in the gauge being equivalent to the air pressure existing in the air pocket at the bottom of the tank. By positioning this pocket at a suitable distance below the bottom of the tank the blink portion of the gauge between the level of the liquid in the gauge chamber and the lowest point at which it is convenient to read may be allowed for, so

that the zero on the gauge may be at any desired level and still accurately correspond with the level at the bottom of the tank.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A fitting for connecting a gauge to a tank, in which it is required to measure the liquid level, comprising a pipe screwed or otherwise attached to the ordinary outlet from the tank and with an air pocket formed by a sleeve surrounding the pipe, and a connection for attachment to the gauge, the sleeve being held by a nut to which the ordinary connecter for the outlet pipe of the tank is screwed, or otherwise suitably attached, substantially as described.

2. In combination with a tank in which the liquid level is required and a gauge in which a column of liquid is supported by air pressure an air pocket situated below the level of the tank and formed between the outlet pipe from the tank and the sleeve surrounding this pipe, the pocket being in communication near its lower end with the outlet from the tank, and also being in communication with the air chamber of the gauge; substantially as described.

3. The improved fitting, including an air pocket for connecting the liquid level indicator to a petrol tank in which the liquid level is to be measured, hereinbefore described and illustrated in the accompanying drawings.

Dated this 27th day of August, 1921.

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[This Drawing is a full-size reproduction of the Original.]

Fig. 1.

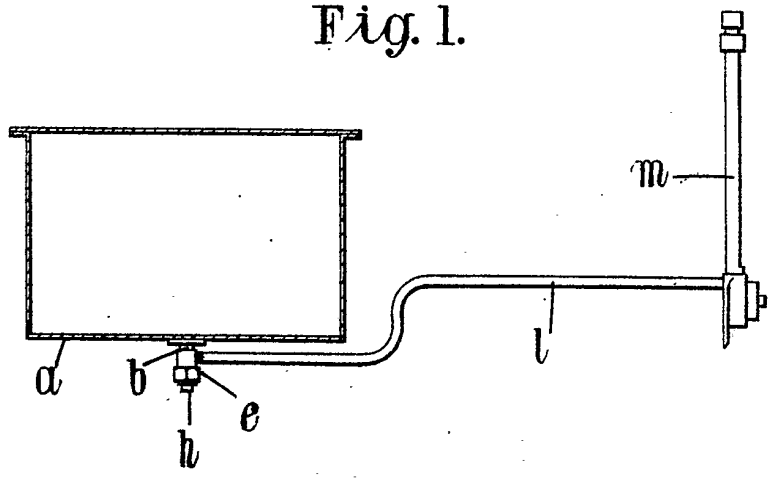
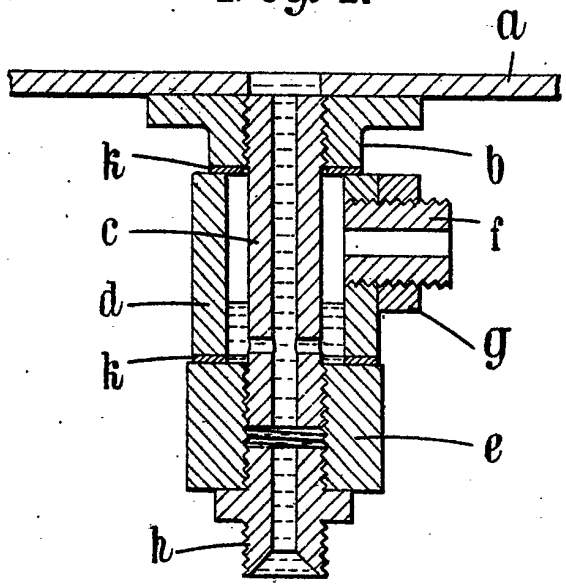


Fig. 2.



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