E. A. CRAMER.

FLUID INDICATOR.

APPLICATION FILED NOV. 23, 1908.

954,423. Patented Apr. 12, 1910.

Fig. 1.

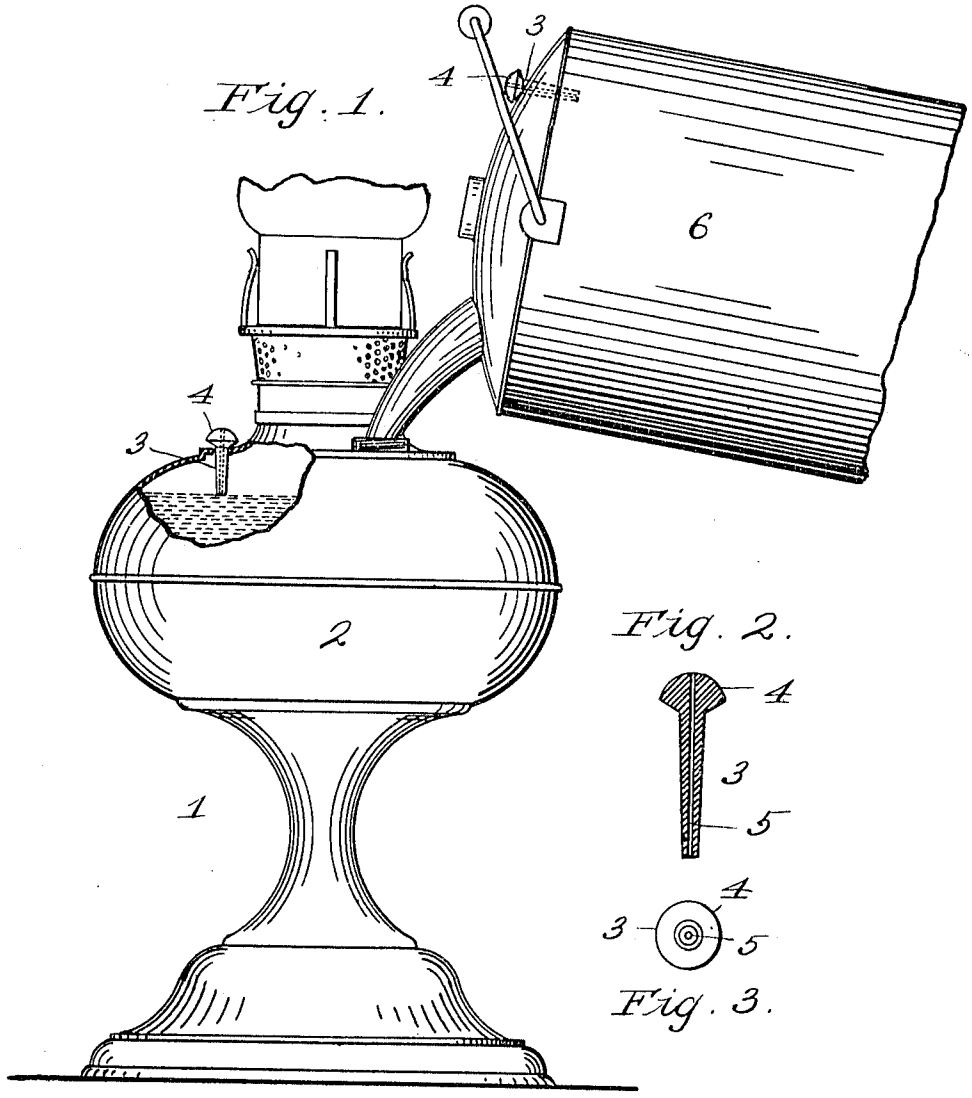

Fig. 2.

Fig. 3.

WITNESSES:

M. Cox.

F. E. Ackley.

INVENTOR.

Ernest A. Cramer,

BY

F. G. Fischer,

ATTORNEY.

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ERNEST A. CRAMER, OF WICHITA, KANSAS.

FLUID-INDICATOR.

954,423. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed November 23, 1908. Serial No. 464,000.

To all whom it may concern:

Be it known that I, ERNEST A. CRAMER, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Fluid-Indicators, of which the following is a specification.

My invention relates to improvements in fluid indicators, and my object is to provide a simple, inexpensive, device of this character whereby a person filling an opaque vessel with a fluid can readily determine when said fluid has almost reached the capacity of the vessel, to the end that there need be no waste by an overflow of the fluid.

The device operates on the principle of capillary attraction and is applicable to opaque lamps, cans, barrels, and other fluid receptacles.

In the accompanying drawing, which illustrates the invention: Figure 1 shows the invention applied to a lamp and a can. Figs. 2 and 3 show a vertical section and a bottom plan view, respectively of the indicator.

1 designates a lamp provided with a fluid receptacle 2, which is being filled from a can 6.

3 designates my indicator which consists of a capillary tube extending through the upper portion of the receptacle 2. Indicator 3 is preferably made of glass or other transparent material and has an enlarged convex head 4 at its upper terminal, which communicates with its lower inlet terminal through a longitudinal bore 5.

When the fluid, being poured into the receptacle, attains sufficient depth to submerge the inlet terminal of the indicator, a portion of the fluid will be drawn by capillary attraction upward into bore 5, and the ascending column of fluid thus produced will be magnified by the convex head of the transparent indicator, so that the fluid may be readily detected and further supply to the receptacle be cut off before an overflow and consequent waste of fluid occurs.

The underside of head 4 is, preferably, coated with a luminous substance to render the ascending column of fluid visible in the dark, so that risk of an explosion need not be taken by holding a light close to a lamp or other receptacle when filling the same with an explosive fluid. The indicator also acts as a safety-valve in providing an avenue of escape for any combustible gas, which might arise from the fluid in the receptacle.

The capillary attraction of the indicator will be governed by its length and the diameter of its bore, hence indicators will be manufactured in various sizes to meet the different conditions to which they may be subjected. The indicators may also be made of different materials and in different shapes, consequently I do not limit myself to the exact form shown, but reserve the right to make such changes as properly fall within the spirit and scope of the invention.

Having thus described my invention, what I claim is:—

A fluid indicator comprising in combination, a stem of transparent material axially bored to form a capillary tube, and an enlarged head formed at the upper end of said stem to constitute a magnifier for said stem.

In testimony whereof I affix my signature, in the presence of two witnesses.

ERNEST A. CRAMER.

Witnesses:
U. G. CHARLES,
J. W. BLOOD.