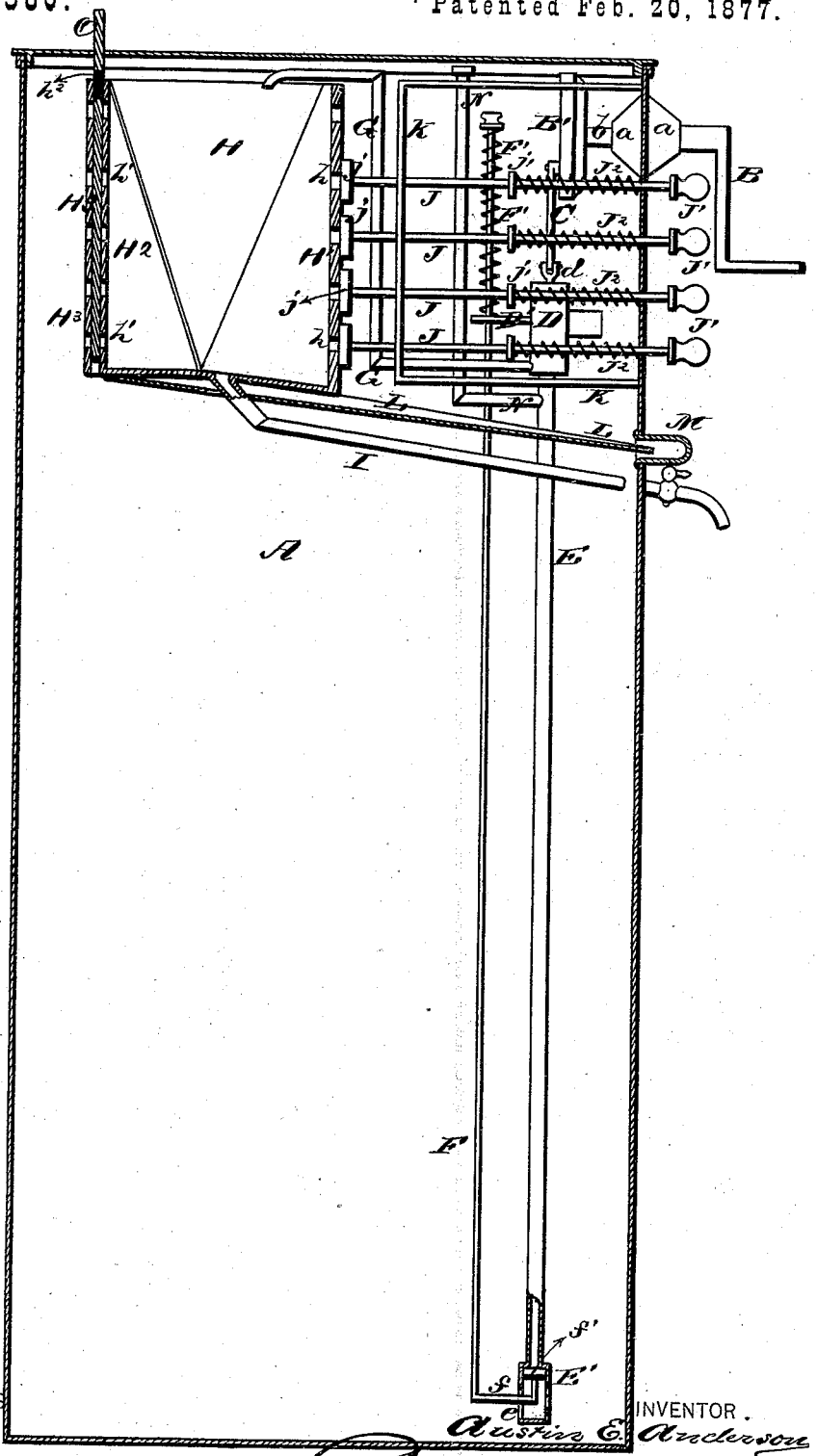
A. E. ANDERSON.

MEASURING OIL-CAN.

No. 187,580. Patented Feb. 20, 1877.



WITNESSES

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AUSTIN E. ANDERSON, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN MEASURING OIL-CANS.

Specification forming part of Letters Patent No. **187,580**, dated February 20, 1877; application filed January 3, 1877.

To all whom it may concern:

Be it known that I, AUSTIN EDWARD ANDERSON, of Richmond, in the county of Henrico and State of Virginia, have invented a new and valuable Improvement in Measuring Oil-Cans; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

The figure of the drawing is a representation of a central vertical section of my measuring oil-can.

This invention relates to devices for measuring oil and other liquids; and it consists mainly in a measuring-vessel in the form of an inverted cone, provided with a series of perforations for allowing the escape of surplus liquid, and combined with devices for opening or closing any one of said perforations. It also consists in the combination, with said measuring-vessel, of an inclined trough, and external transparent indicator, for the purpose of showing when the desired amount of liquid has been supplied to the said vessel. It also consists in the combination, with the said vessel, of certain devices for supplying it with liquid, or cutting off the supply thereof at will. It consists, finally, in the construction, arrangement, and combination of sundry additional devices hereinafter particularly set forth.

In the annexed drawing, A designates a can or other receptacle for containing oil or other liquid. Said receptacle is provided near its top with an expansion or bulge, *a*, in the form of a double cone, which affords a bearing for a shaft, *b*, operated by a detachable external crank-arm, B, and carrying on the inside of said can or receptacle A a disk or crank-wheel, B′. To the inner face of said disk B′, is pivotally attached the upper end of a connecting-rod, C, the lower end of which is similarly secured to a plunger or piston rod, *d*, that works in pump D. The lower end of said pump is provided with a pipe or tube, E, extending to the bottom of said can or receptacle A, where it is expanded so as to form a drum or chamber, E′, slotted at *e*. Instead of this construction, the entire tube E may be made larger, and similarly slotted near the bottom. F designates a valve-rod, which extends from a point near the top of can A to a point near the bottom of the same, where it is provided with a bent end, *f*, which works in slot *e*, and carries a small valve, *f′*. The upper part of said rod F is provided with a retracting-spring, F′, which bears at its lower end against a fixed plate, D′, attached to the upper end of the casing of pump D. Said rod passes through a perforation in said plate, and is braced thereby. Said spring F′ operates to close the lower end of tube E; but when said rod F is forcibly depressed against the resistance of said spring, the oil or other liquid in can A enters said tube E through slot *e*, and is drawn up to the pump D by the operation of the devices hereinbefore described.

G designates the discharge-tube of said pump D, which is bent so as to supply the said oil or other liquid to a measuring-vessel, H, secured in the upper part of can A. Said measuring-vessel H is shaped like a hollow inverted cone, provided with two vertical offsets, H^1 H^2, on opposite sides thereof, which offsets have vertical external faces each containing a vertical series of perforations marked, respectively, *h* or h^1, for allowing the escape of liquid exceeding the quantity desired. From the bottom of said measuring-vessel an inclined exit-tube, I, extends to the outside of can A. J designates a series of horizontal rods provided at their inner ends with disks or valves *j j*, which set against the outside of perforations *h h*. Said rods extend through the side of can or receptacle A, and are provided at their outer ends with handles J^1. Said rods are supported by said can, and by a frame, K, rigidly secured to the inside thereof, through perforations in which they pass, and they are also provided with collars *j′* and springs J^2, interposed between said collars and the inside of can A. Said springs bear against said collars, and operate to hold disks or valves *j j* against openings *h h*. Said openings *h h* are arranged so that the space in measuring-vessel H, below the level of each one of them, will contain a certain quantity of liquid, and this quantity is indicated by

suitable characters on the outside of can A, near the handle or knob J′ of the rod J, which opens and closes said perforation. Below measuring-vessel H is arranged an inclined trough or chute, L, which receives the oil or other liquid escaping through apertures *h*, and conducts the same or a part thereof to a glass indicator or transparent pocket, M, arranged in the side of can or receptacle A. N designates a supply-tube, which connects with the upper part of induction-tube E, and is provided at its upper end with a coupling, so that a flexible tube may be attached thereto. The external end of said flexible tube connects with the barrel or other reservoir from which the liquid is to be originally drawn.

The operation of the devices above described is as follows: Crank-arm B is turned, until, by the action of wheel or disk B′ and pump D, a considerable quantity of the liquid is supplied to said can or receptacle A. Said can is then disconnected from said barrel, and the rod J corresponding to the quantity of liquid to be measured is then drawn out, so as to open one of the apertures *h* already described. Valve-rod F is then depressed so as to open slot *e*. Said rods F and J may be secured in the positions thus given them by means of any suitable fastening device.

Crank-arm B is again rotated, pumping the liquid up through tube E, and forcing it through bent discharge-tube G into measuring-vessel H. When it rises to the level of the aperture *h*, opened as before described, it overflows and drops into trough or chute L, which conveys it into transparent pocket or indicator M. As soon as the operator discovers its presence there, he stops pumping. When the liquid ceases to flow into said indicator, the cock *i* of exit-tube I may be turned, and the required quantity drawn off. If preferred, said exit-tube may be left closed, retaining the measured liquid until it is required for use.

Offset H^2 is shown provided with a substitute for rods J and apertures *h*. This consists of a vertical guide-plate, H^3, which has a vertical series of perforations, h^2, that register with perforations h^1, in combination with a slide, O, which is adapted to be raised or lowered in the guideway formed between said guide-plate H^3 and offset H^2, so as to cover all the apertures h^1 h^2, or to leave uncovered any desired number from the top down. The upper part of said slide may be graduated so as to indicate the quantity of liquid retained in said measuring-vessel in any given position of said slide. Said offset H^2, guide-plate H^3, and slide O, may all be discarded, and offset H^1 alone used with its perforations *h*, and devices for closing the same, as described.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of tube E, having slot *e* near its lower end, with valve-rod F, and a spring for holding up said rod, substantially as set forth.

2. The combination of measuring-vessel H, having perforations *h*, with trough or chute L, and transparent indicator M, substantially as and for the purpose set forth.

3. The combination of pump D, with devices for operating the same, pipes E, G, and N, measuring-vessel H, and can A, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

AUSTIN EDWARD ANDERSON.

Witnesses:

HENRY FITZGERALD,

WELLINGTON BRANDIS.