

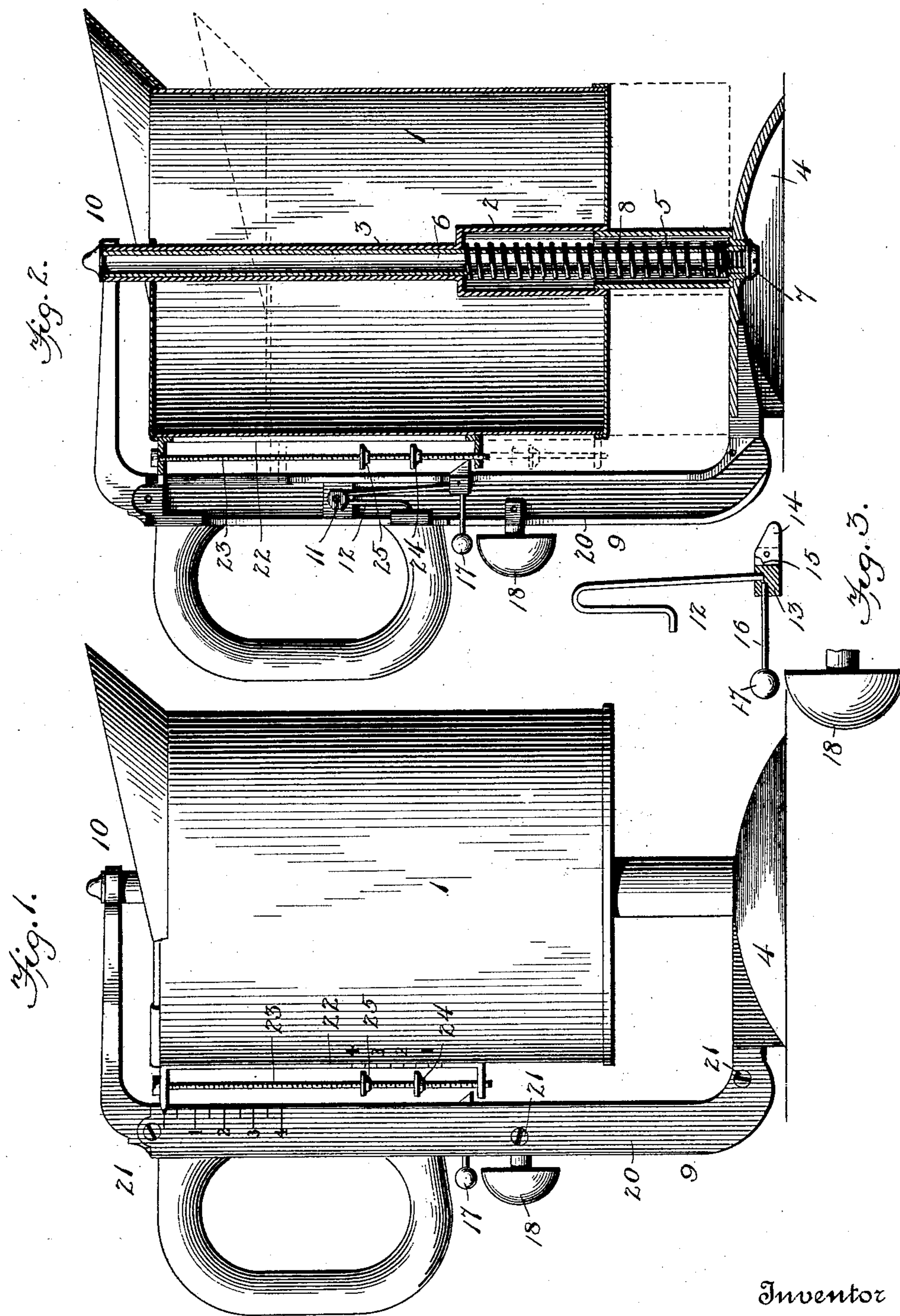
No. 625,901.

Patented May 30, 1899.

J. REUSING.
LIQUID WEIGHING VESSEL.

(Application filed Feb. 9, 1899.)

(No Model.)



Witnesses

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JOHN REUSING, OF BALTIMORE, MARYLAND.

LIQUID-WEIGHING VESSEL.

SPECIFICATION forming part of Letters Patent No. 625,901, dated May 30, 1899.

Application filed February 9, 1899. Serial No. 705,078. (No model.)

To all whom it may concern:

Be it known that I, JOHN REUSING, a citizen of the United States, residing at Baltimore, Maryland, have invented certain new and useful Improvements in Liquid-Weighing Vessels, of which the following is a specification.

This invention relates to liquid-weighing vessels, and especially to that type of such vessels wherein the liquid contents are weighed and the volume of the contained liquid indicated in liquid measure.

The object of the present invention is to provide a vessel of the kind referred to wherein when the desired quantity of liquid has been discharged into the vessel the latter, through suitable mechanism, will give both a visual and audible indication of the fact.

It has for its further object to improve, simplify, and render more certain this class of liquid-measuring vessels generally.

To these ends my invention consists in the features and in the construction, arrangement, and combination of parts hereinafter described and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a perspective view of my improved device, and Fig. 2 is a vertical central section thereof. Fig. 3 is a detail view of the signal device.

Referring to the drawings, the numeral 1 indicates a liquid-measure adapted to hold any suitable quantity of liquid. Projecting up through its bottom is a tubular sleeve 2, terminating at its upper end in a tube 3 of reduced diameter.

The numeral 4 indicates a base of any suitable construction, in the present instance illustrated as consisting of an inverted-dish-shaped metallic casting provided with a central interiorly-threaded perforation in which is screwed the reduced and threaded end of a vertical tube 5, that is telescopically fitted in the tube 2. Projecting up through the base 4, tube 5, and tubes 2 and 3 is a rod or tube 6, interiorly screw-threaded at its lower end and having fitted in said threaded end a nut 7. Arranged about the lower end of the tube or rod 6 is a coiled spring 8, one end of which bears against the bottom of the tube 5

and the other end bears against the upper end of the tube 2. This spring operates in the same manner as the well-known spring-balance and sustains and measures the weight of the liquid discharged into the vessel 1, the spring being so constructed as to resist in a well-known manner the weight placed upon it.

Attached in any suitable manner to the base of the device is a handle 9, which projects upwardly parallel to the measuring-vessel 1 and at its upper end is bent horizontally at a right angle and at its extremity is provided with a bearing 10, in which is fitted the upper end of the tube 6.

From the foregoing it will be readily understood that the vessel 1 is free to rise and fall vertically upon the tube 6, its rising-and-falling movement only being determined by the resistance of the spring, which is graduated in the same manner as a spring-scale to sustain a certain weight proportionate to the compression of the convolutions of the coiled spring.

The handle 9, as shown in Fig. 2, is formed hollow and at any suitable point is provided with a transverse pin 11, upon which is suspended a leaf-spring 12, one end of which bears against a fixed support—as, for example, the outer side of the handle—and to the other end of which is rigidly secured a bifurcated shoe 13, and between the forked ends of the latter is pivoted a latch 14, which projects through a suitable slot formed in the inner side of the handle. The latch 14 is beveled upon its upper side, as shown. The rear or inner end of the latch bears against the vertical face of the shoe 13 and prevents said latch from turning downward past the horizontal, but at its upper edge is recessed or cut away, as at 15, whereby it may be swung upward about its pivot, for the purpose hereinafter made apparent.

To the shoe 13 is rigidly secured one end of a rod 16, at the extremity of which is fixed a hammer or striker 17. Attached to the handle is a bell or gong 18, disposed in juxtaposition to the hammer or striker 17.

The hollow handle is closed by a cover 20, secured to the handle in any suitable manner, consisting in the present instance of screws 21.

Attached to the exterior of the vessel 1 is

a bracket 22, the opposite ends of which are bent at right angles to the vessel. The upper end of the bracket is bifurcated and engages the opposite sides of the handle-cover 20, as indicated in the drawings. The bracket is disposed opposite the handle, and its upper bifurcated end embraces the handle-cover 20 and operates to guide the vessel in its vertical movements. Fixed in the opposite ends of the bracket 22 is a screw 23, on which are threaded thumb-nuts 24 and 25. Indicated upon the handle are graduated marks, with which the forked end of the bracket is adapted to register to indicate the weight of the liquid in the vessel, and said marks are so spaced as to indicate the weight of the liquid in pints or quarts or their fractional parts and multiples. Formed on the bracket 22 or on the vessel itself are a plurality of corresponding marks, whereby the thumb-nuts 24 and 25 may be adjusted on the screw 23, whereby they may be caused to sound the bell 18, as will presently be described, to indicate that different quantities of liquid have been discharged into the vessel. For example, let it be assumed that the nuts 24 and 25 have been respectively adjusted to register with the one and two quart marks on the bracket. Then when a quart, by weight, of liquid has been discharged into the vessel the nut 24 in the descent of the vessel strikes the latch 14 and swings the shoe to one side and with it the hammer 17, and when the nut passes below the latch the spring 12 quickly restores the shoe to its normal position, thus causing the hammer to strike the bell and indicate audibly that one quart, by weight, of liquid has been discharged into the vessel. If a sufficient quantity of liquid is discharged into the vessel, the nut 25 will cause a second stroke to be sounded on the gong, thus indicating that two quarts have been measured into the vessel. When the liquid is emptied from the vessel, the latter rises under the action of the coiled spring, and as the nuts engage the pivoted latch the latter swings up about its pivot to permit the nuts to pass it. It will be manifest that the nuts can be adjusted to sound the gong in such manner as to indicate any measure desired.

By means of my improved device the weight by measure is indicated both visibly and audibly, whereby the liquid may be measured as well in the dark as in the light.

Having thus described my invention, what I claim is—

1. The combination with a handled support and a spring and a measuring vessel supported on the support, of a gong attached to the handle, a spring secured to the handle, a hammer carried on the free end of the spring, a latch pivotally connected with the hammer and means carried by the vessel for engaging said latch in the descent of the vessel and operating to laterally throw to one side the latch and spring to actuate the hammer and strike the gong, substantially as described.

2. The combination with a handled support and a spring, and a measuring vessel yieldingly supported on said support, of a gong attached to the fixed handle, a hammer carried on the free end of the said spring, a latch pivotally connected to the hammer, means carried by the vessel for engaging said latch in the descent of the vessel and operating to laterally throw to one side the latch and spring to actuate the hammer and strike the gong, an index-hand carried by the vessel, and graduations carried by the handle-support and arranged to be brought into register with the pointer to indicate the descent of the vessel, substantially as described.

3. The combination with a spring and a measuring vessel supported thereon, of a fixed support arranged adjacent to the vessel, a gong arranged thereon, a spring fixed to the support, a hammer carried by the spring, a latch connected with the hammer, and means adjustably carried by the vessel for engaging said latch in the descent of the vessel to actuate the hammer and strike the gong, substantially as described.

4. The combination with a base, of a spring supported thereon, a measuring vessel supported on the spring, a handle fixed to the base and disposed vertically beside the vessel, a flat spring fixed at one end on the handle, a bifurcated shoe fixed on the free end of the spring, a latch pivoted in the forked end of the shoe and abutting the vertical face of the latter to hold the latch in a horizontal position, a hammer carried by the shoe, a gong fixed on the handle, a vertical threaded rod fixed on the outer side of the vessel, and a nut adjustably arranged on said rod and adapted to engage said latch to actuate the hammer, substantially as described.

5. The combination with a base, of a vertical tube fixed thereon, a measuring vessel provided centrally with a vertical tube telescoped over the tube on the base, a coiled spring arranged in said tubes and supporting the vessel, a handle fixed to the base and extending vertically beside the vessel, a flat spring fixed at one end on the handle, a bifurcated shoe fixed on the free end of the spring, a latch pivoted in the free end of the spring and arranged to swing upward from a horizontal position, a hammer carried by the shoe, a gong fixed on the handle, a vertical threaded rod fixed on the outer side of the vessel, nuts adjustably arranged on said rod and arranged to successively engage said latch on the descent of the vessel to actuate the hammer, and an index-hand or pointer adapted to register with graduations on the handle, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN REUSING.

Witnesses:

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