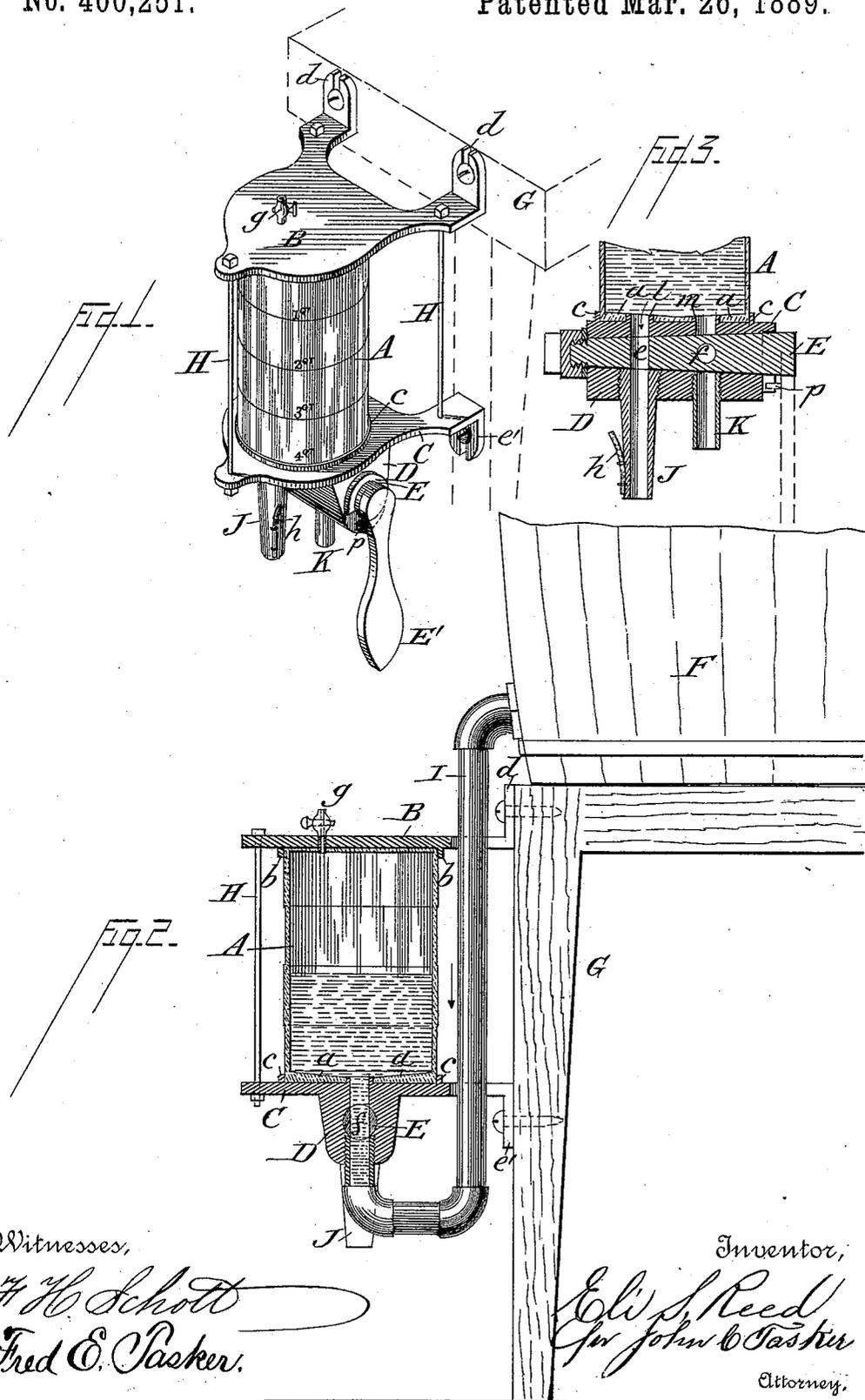


(No Model.)

E. S. REED.
MEASURING FAUCET.

No. 400,251.

Patented Mar. 26, 1889.



Witnesses,

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UNITED STATES PATENT OFFICE.

ELI S. REED, OF CHATTANOOGA, TENNESSEE.

MEASURING-FAUCET.

SPECIFICATION forming part of Letters Patent No. 400,251, dated March 26, 1889.

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To all whom it may concern:

Be it known that I, ELI S. REED, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Measuring-Faucets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in measuring-faucets or transparent receivers for use in connection with casks, tanks, barrels, vessels, cisterns, or other receptacles containing liquids or fluids, the object of the invention being to provide a transparent receiver, which will serve both as a show device, whereby to easily and nicely exhibit the kind and quality of the liquid or fluid contained in the main vessel, and also as a measuring-vessel, from which the liquid or fluid, after it has been fed thereinto from the main vessel, may be discharged in different quantities, the size of which may be predetermined and accurately measured by a graduated scale on the transparent sides of the receiver.

The invention consists, essentially, in the combination, with a graduated transparent receiving-vessel connected with the main receptacle or tank, of a double valve so arranged that when the inlet-opening through which the liquid is fed from the main receptacle into the measuring-vessel is open the discharge or outlet pipe may be closed, and also when the inlet-opening is closed the discharge may be opened; and, further, it consists in certain peculiarities in the construction, arrangement, and combination of the several parts of the measuring-faucet, substantially as will be hereinafter described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a perspective view of my improved measuring-faucet, the frame which supports it being shown in dotted lines. Fig. 2 is a vertical section of the same, showing its mode of arrangement with a tank or vessel from which liquid or fluid is fed into the faucet, the valve being in this figure shown in the position that it occupies when

the liquid is entering the transparent vessel. Fig. 3 is a longitudinal section of the valve and valve-body, and shows also a portion of the transparent vessel and the inlet and discharge pipes, the valve being in the position that it occupies when the inlet opening into the transparent vessel is closed and the discharge is open.

F denotes a receptacle of any kind adapted to contain a liquid or fluid. I am restricted to no particular kind of receptacle, as my invention is equally applicable to cisterns, casks, barrels, tanks, vats, and receptacles of all kinds. In Fig. 2 the receptacle F is shown as mounted upon a support, G. To this support my improved measuring-faucet is attached in such a position that the upper end thereof may be below the bottom of the receptacle F, this position being necessary in order that the entire contents of the receptacle F may be fed into the measuring-vessel.

A denotes a cylindrical glass vessel of suitable size. This vessel may be made of any suitable transparent material. It is made transparent, so that the contents thereof may be easily inspected. It is provided with a series of graduations. In Fig. 1 I have indicated an example of such a series where the graduations will be seen to run from one to four quarts. I do not, however, intend to confine myself to this particular scale, but reserve the liberty of marking upon the surface of the vessel any desired graduating-scale. The transparent receiver or vessel A is supported between two plates, an upper or cap plate, B, and a lower or base plate, C, which plates are connected together by means of vertical tie-rods H H, which pass through the said plates B and C at suitable points, and are held firmly in place by means of nuts on the ends of said rods. The under surface of the cap-plate B is provided with a circular flange or rim, *b*, projecting downwardly, within which flange or rim the upper end of the vessel A neatly and nicely rests. The upper surface of the base-plate C is similarly provided with a circular rim or flange, *c*, within which nicely fits the lower end of the transparent vessel A. The cap-plate B is provided with suitable lugs—as, for instance,

the slotted lugs $d d$ —through which pass bolts or screws for attaching the device to the support G, or such other means as may be provided for holding the measuring-faucet. Likewise the lower plate or base, C, is provided with slotted lugs $e' e'$, and screws pass through said lugs and enter the support G. (See Figs. 1 and 2.) By thus securing the upper and lower plates of the device to an upright support such device is located in proper position relatively to the main tank or vessel, and the transparent vessel A occupies a vertical or upright situation.

I denotes a pipe running out of the tank or receptacle F near its lower end and connecting with the inlet-pipe K, which enters the valve-body D. The valve-body D is secured horizontally to the lower side of the base C, and may be integral therewith, if desired, as shown in the drawings. Within the valve-body D, above the inlet-pipe K, is a passage, which extends upward and through the plate C and enters the bottom of the vessel A, said plate C being flanged circularly at m , so as to fit nicely within a circular opening in the bottom of the vessel A.

J denotes the discharge-pipe, which is screwed into the lower side of the valve-body D. A passage extends up through the valve-body above the discharge and enters the bottom of the vessel A through plate C, said plate being flanged at l to fit nicely within a circular opening in the bottom of the vessel A. The valve-body D is bored longitudinally in a tapering manner to receive a plug-valve, E, which fits nicely therein, and has two transverse passages or openings, e and f , whose directions are at right angles to each other, and which are located at proper points on the plug-valve to permit them to register with the inlet and discharge passages just described. Thus the opening e will register with the discharge-passage and the opening f will register with the inlet-passage when the valve is properly turned to permit such registry. Herein, then, consists one of the important features of my invention, to wit: the double plug-valve, whereby, when the inlet-opening is closed, the discharge or outlet will be open, and when the discharge or outlet is closed the inlet will be open. In Fig. 3 the inlet is closed and the discharge is open. In Fig. 2 the inlet is open. The normal condition of the device is seen in Fig. 2, where the inlet is open and the liquid from the main receptacle is being fed through pipe I into the vessel A. When the vessel A is filled, of course no more liquid can enter, but the liquid-pressure will be constant in the vessel A and the tank F. The plug-valve E is provided with a handle, E' , by means of which it is easily manipulated. The extent of movement of the handle E' is governed by pins p . By grasping this handle the valve can be changed from the position shown in Fig. 2 and made to occupy the position shown in Fig. 3, where the inlet is cut off, and thus

the passage of liquid from the tank F into the vessel A ceases, while at the same time the discharge is opened and liquid flows out of the vessel A through pipe J into some convenient receptacle placed beneath pipe J to receive it. Pipe J is furnished with an air-vent, h , and the pipe, moreover, serves as a funnel, thus dispensing with the necessity of having a separate funnel. The air-vent or outlet-pipe h allows the exit of the air from the vessel beneath pipe J while it is being filled with the liquid as it courses out through said pipe. The upper plate, B, is provided with an air-vent, g , which communicates with the head of vessel A, the short communicating pipe passing down through cap-plate B and entering the upper end of vessel A, as is clearly shown in Fig. 2; hence when it is desired to remove any amount of liquid from vessel A the air-vent g can be opened and the outflow of the liquid facilitated thereby. It will thus be observed that the transparent vessel A will serve as a sort of show device to exhibit the kind, quality, and condition of the liquid with which the main vessel or receptacle F is filled. Of course this vessel A may be located in any convenient position, either near by the receptacle F or at a distance therefrom. In the drawings the vessel is shown close to the receptacle; but it may be removed to a distance, if desired. Such removal will necessitate nothing more than a change in the arrangement of the feed-pipe I.

The simplicity of operation in my device is a feature to which I desire to call especial attention. It will be noted that the vessel A is kept constantly full. Whenever, therefore, it is desired to remove a certain amount—say one quart—the handle E' will be lifted from its depending position (indicated in Fig. 1) to a horizontal position, thus closing the supply and opening the discharge. The vessel A will then begin to empty its contents, and when the level of the liquid therein has sunk to the graduation marked "one quart," then of course a quart of liquid has been removed from the vessel, and this being the desired amount the operator will throw back the handle E' again to its vertical position, which will immediately close the discharge and open the inlet, and thus the vessel A will again be filled to its full capacity. Should it be desired to remove a gallon of liquid, the operator will leave the discharge open long enough to enable the complete contents of the vessel to have exit through the discharge. The interior bottom surface of the vessel A is preferably made inclining, as at $a a$, from the outer edge toward the center. This is for the purpose of permitting the liquid to run more easily toward the center of the vessel when the latter is being emptied, and thus to effectuate the complete removal of all the contents of the vessel when it is desired.

Having thus described my invention, what

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

5 The combination of the vessel A, having the scale of graduations upon its sides, the cap-plate B, the base-plate C, the tie-rods H, connecting said cap and base plates, said cap-plate B having lugs *d d*, and said base-plate C having lugs *e' e'*, whereby the plates are

attached to the support, substantially as described.

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

ELI S. REED.

Witnesses:

FRED E. TASKER,
S. HERBERT GIESY.

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