Visible Display Attachment for Measuring Pumps

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To all whom it may concern:

Be it known that we, WILLIAM S. TOWNSEND and FRANK E. DOUGLASS, citizens of the United States, residing at Rochester, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Visible Display Attachments for Measuring Pumps, of which the following is a specification.

Our invention relates to the visible two-tube display attachment for measuring pumps shown in Fig. 4 of our Patent No. 1,458,233, May 15, 1923.

The object of the invention is to provide a display attachment particularly adapted for oil measuring and dispensing pumps; said attachment comprising, as in Fig. 4 of the patent referred to, a display container formed of parallel glass tubes connected at their upper ends for passage of the oil or other liquid and provided at their lower ends with a base having an inlet for connection with the discharge side of a pump opening into the lower end of one of said tubes and an outlet port communicating with the lower end of the other of said tubes, whereby the container will be constantly filled with liquid from the pump while being dispensed so that the purchaser may see the character of the liquid being supplied.

A further object is to provide a contracted or valve discharge nozzle for said outlet port and a normally closed air vent at the upper end of the container to permit of readily filling the container and thereafter holding the contents of the container therein while the pump is not in operation.

These objects we accomplish by the construction shown in the accompanying drawing, in which:

Fig. 1 is a central vertical section through the display attachment.

Fig. 2 is a similar view at right angles to Fig. 1.

Fig. 3 is a section on line 3—3 of Fig. 2 looking down.

The top or cap 1 of the display device is shown as hollow so that its chamber 2 will form a through connection for the upper open ends of two vertical parallel glass tubes 3 and 4, said upper ends being seated in seats 5 and 6 formed in the lower side of the top or cap 1 and resting on suitable gaskets 7.

The cap or top 1 is further provided with a normally closed vent valve 8 and the central portion of the cap is provided with a bolt aperture 9.

The lower open ends of the tubes or cylinders 3 and 4 are seated on gaskets 8 within seats 10 formed in the upper side of the base 12. The base 12 is formed with an inlet port 13 leading into the lower open end of the glass tube 4 and adapted for connection with the discharge side of a pump, while the opposite side of the base has a discharge port 14 leading down from the lower open end of the tube 3 to a discharge nozzle 15 screwed into the lower end of said port 14.

This nozzle has a restricted outlet provided with a valve seat 16 at its lower end and an upwardly closing valve 17 closing against said seat. The stem 18 of the valve is guided by two crosstabs 19 within the nozzle and is moved upwardly by a spring 20 which rests between the upper crosstabs 19 and the nut or head 21 on the upper end of the valve stem.

A tie rod 25 is screwed at its lower end into a threaded opening 26 and passes up through the aperture 9 in the cap or top 1, where it is provided with nuts 27, 28 which, when tightened, will draw the cap 1 and base 12 towards each other and so press the tubes 3 and 4 tightly to their gasketed seats.

The attachment is intended to be used in lieu of the single display cylinder shown in our Patent No. 1,450,994 and operates as follows: upon opening the valve 8 and starting the pump the oil or liquid will be forced up through tube or cylinder 4 and then pass down cylinder 3 into the discharge nozzle 15; the restriction of the nozzle area or outlet by the valve 17 causing the tubes to be first filled, after which the vent 8 will be closed and the oil or liquid will remain in the display tubes 3 and 4 for display purposes until the pump is operated for dispensing. Then the force of the liquid leaving the pump will move the body of liquid being displayed in the two tubes and cause it to open the valve 17 in the discharge nozzle and issue forth for dispensing purposes. The closing of the air valve 8 and the cessation of the pumping cause the liquid to remain in the tubes for display purposes until dispensing of the liquid is again required. In order that the dealer's name or other matter may be exhibited, the adjacent faces of cap 1 and base 12 are provided with pins or lugs 30, 31 which project towards each other, as in Fig. 2, at opposite sides of the tie rod 25.
and between the glass tubes or cylinders 3 and 4. Tags bearing the dealer's name or other matter and formed of oblong plates 31, 31 are placed with their ends behind these legs 30, 30, their backs against the tie rod 25 and their long sides against the glass cylinders, thus concealing the tie rod from both sides of the attachment.

While we have shown our display device adapted to be used in lieu of that shown in our Patent 1,450,994, it is obvious that it may by slight changes in the base be used as in Fig. 4 of our Patent No. 1,455,235, the inlet from the pump being then placed in the bottom of the base and the outlet or discharge nozzle at the side.

It is obvious that when the display is only desired during the dispensing, the valves may be omitted so that an uninterrupted flow will be made from the pump up through one tube and down through the other to the outlet.

What we claim is:

1. A visible display container for pumps, comprising a pair of parallel transparent tubes connected at their upper ends for through passage of the liquid, and a base for the lower open ends of the tubes; said base having a pump supply inlet port opening into the lower end of one of the tubes and an outlet or discharge communicating with the lower end of the other of said tubes, whereby the liquid will be forced by the pump up through one tube and down the other one to the outlet to exhibit same.

2. A visible display container for pumps, comprising a pair of parallel transparent tubes connected at their upper ends for through passage of the liquid, a base for the lower open ends of the tubes; said base having a pump supply inlet port opening into the lower end of one of said tubes and an outlet or discharge communicating with the lower end of the other of said tubes, and a discharge spout or nozzle leading from said outlet or discharge port and having a restricted area acting to hold the liquid in the two tubes for exhibition purposes.

3. A visible display container for pumps, comprising a pair of parallel transparent tubes connected at their upper ends for through passage of the liquid, a base for the lower open ends of the tubes; said base having an inlet port opening into the lower end of one tube and an outlet or discharge port leading from the open lower end of the other of said tubes, and a discharge spout leading from said outlet port and having a valve which when closed will hold the two tubes filled for exhibition purposes.

4. A visible display container for pumps, comprising a cap or top having a through passage and a normally closed air vent, two open-ended transparent tubes connected at their upper ends by said passage, a base on which the lower ends of the tubes are seated, means for connecting the cap and base; said base provided with an inlet port leading from the lower end of the one tube and adapted for connection with the discharge side of a pump and a discharge port leading from the lower end of the other tube, and a discharge nozzle for the outlet port provided with an outwardly opening spring-pressed valve.

5. A visible display container for pumps, comprising a cap or top having a through passage, a pair of transparent tubes communicating at their upper ends with said passage, a base having a pump-connecting inlet port leading to the lower open end of one tube and an outlet port leading from the lower open end of the other tube down to the middle portion of the base, a discharge nozzle depending from the said discharge port and provided with an outwardly opening discharge valve.

6. A visible display container, comprising a cap having a through passage, parallel display tubes connected at their upper ends by said passage, a base having inlet and outlet ports with which the respective lower open ends of the tubes are connected, a central tie rod connecting the base and cap, tag-retaining devices on the adjacent faces of the cap and base at opposite sides of the tie rod; whereby a tag or tags may be held in place between the tubes.

7. A visible display container, comprising a cap having a through passage, parallel display tubes connected at their upper ends by said passage, a base having inlet and outlet ports with which the respective lower open ends of the tubes are connected, a central tie rod connecting the base and cap, tag-retaining devices on the adjacent faces of the cap and base at opposite sides of the tie rod, and an oblong tag held by said retaining devices with its back to the retaining rod and its sides edges adjacent to the two tubes.

In testimony whereof we affix our signatures.

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