No. 880,256. PATENTED FEB. 25, 1908.

F. VOCKE.

STOP AND MEASURING COCK.

APPLICATION FILED SEPT. 26, 1907.

Fig. 1.

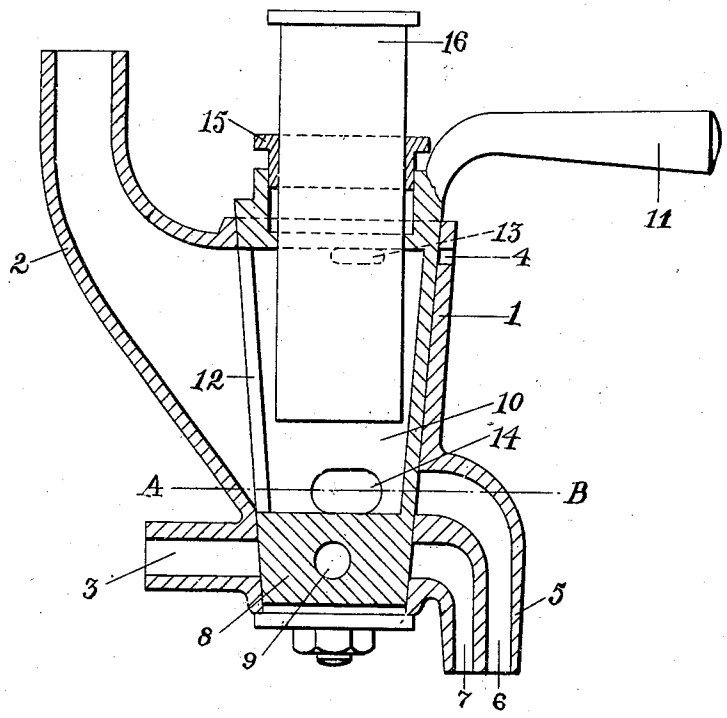
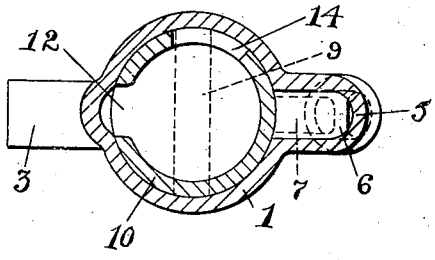


Fig. 2.



Attest:

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STOP AND MEASURING COCK.

No. 880,256. Specification of Letters Patent. Patented Feb. 25, 1908.

Application filed September 26, 1907. Serial No. 394,752.

To all whom it may concern:

Be it known that I, FRANZ VOCKE, subject of German Emperor, residing at Berlin-Schöneberg, Germany, have invented certain new and useful Improvements in Stop and Measuring Cocks, of which the following is a specification.

This invention relates to a stop and measuring cock having a measuring chamber alterable in size by means of a piston and the object of the invention is to provide a cock whereby two different fluids, subjected to different pressures, and one of which is measured, can be drawn off either mixed or separately.

The invention comprises the features of construction and combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawing in which:

Figure 1 is a vertical longitudinal section and Fig. 2 is a section on the line A—B of Fig. 1.

In this drawing 1 is the casing of the cock having a funnel like inlet pipe 2 and a second inlet pipe 3 situated below the inlet pipe 2.

4 is an air inlet in the upper part of the casing and 5 is the outlet nozzle having two passages 6 and 7 therein, one located above the other. The lower passage 7 is directly opposite the inlet pipe 3. The plug comprises a solid lower portion 8 having a passage 9 extending diametrically therethrough and adapted to connect the inlet pipe 3 with the lower passage 7 in the nozzle 5; a measuring chamber 10 and a handle 11.

12 is a long narrow slot in the walls of the measuring chamber having its length equal to the height of the adjacent part of the inlet pipe 2 and 13 is an oblong slot in the upper part of the walls of the chamber adapted to register with the air inlet 4 to admit air to the chamber.

14 is an oblong outlet opening in the lower part of the chamber whose vertical center is in the same vertical plane as the center of slot 13 and adapted to register with the upper passage 6 in the nozzle 5 to permit the contents of the chamber to flow through said passage. It will be noted that the left hand wall of the opening 14 is in the same vertical plane as left hand wall of the passage 9 and that the diameter of said passage is just half the long diameter of the opening 14, so that when the cock is turned to permit the fluids to flow through the nozzle, the opening 14 will uncover the passage 6 before the passage 7 thus the chamber 10 may be emptied while the passages 3 and 7 are disconnected.

15 is a stuffing box in the top of the plug and 16 is a movable piston passing through said stuffing box into the chamber whereby the capacity of said chamber may be varied.

The cock is operated in the following manner. The fluid to be measured flows through the inlet pipe 2, through the slot 12 into the measuring chamber 10, from which the air is forced back in bubbles through the pipe 2. If the plug is then turned round a certain angle, by means of the handle 11, the slot 12 communicating with the pipe 2 is closed; on the other hand, the opening 14 is brought in front of the passage 6 while at the same time communication with the air is effected by means of the hitherto closed hole 4 and the slot 13 so that the fluid can escape from chamber 10 through the passage 6. If the plug is turned still further, the inlet and discharge passages 3 and 7 are brought into connection by means of the passage 9; in this way the second fluid can then be drawn off in any desired quantity. When the plug is in this latter position, a mixture is obtained consisting of a measured quantity of one fluid and any requisite quantity of the other. When, however, the plug is in its central position, shown in Fig. 1, each fluid can be drawn off by itself by turning the plug sufficiently to the right or left from this position and replacing it in its central position.

I claim as my invention:

1. A measuring cock comprising a casing having inlets 2 and 3 and two outlets, a plug having a chamber therein and means for connecting the chamber with one of the outlets while the other outlet is closed or for simultaneously connecting the two outlets one with the chamber and one with the inlet 3.

2. A measuring cock comprising a casing having two inlets and two outlets, a plug having a chamber therein having an inlet and an outlet opening in its walls and a diametrical passage below the chamber, the outermost portions of the left hand walls of said passage and outlet opening of the chamber being in the same vertical plane and said passage having a diameter half that of the long diameter of the outlet opening of the chamber and a piston movable in the chamber.

3. A measuring cock comprising a casing, an upper inlet pipe, a lower inlet pipe, a noz-

zle having an upper and a lower outlet passage therein, said lower passage being diametrically opposite the lower pipe, a plug in the casing having a measuring chamber therein, a piston movable in said chamber, said plug having a passage extending through its lower part below the chamber and adapted to connect the lower inlet pipe with the lower outlet passage and the walls of the chamber having an inlet slot and an oblong outlet opening therein, said outlet opening being situated so as to uncover the upper passage in the nozzle before the lower inlet pipe is connected with the lower outlet passage by the passage in the plug.

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

FRANZ VOCKE.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.