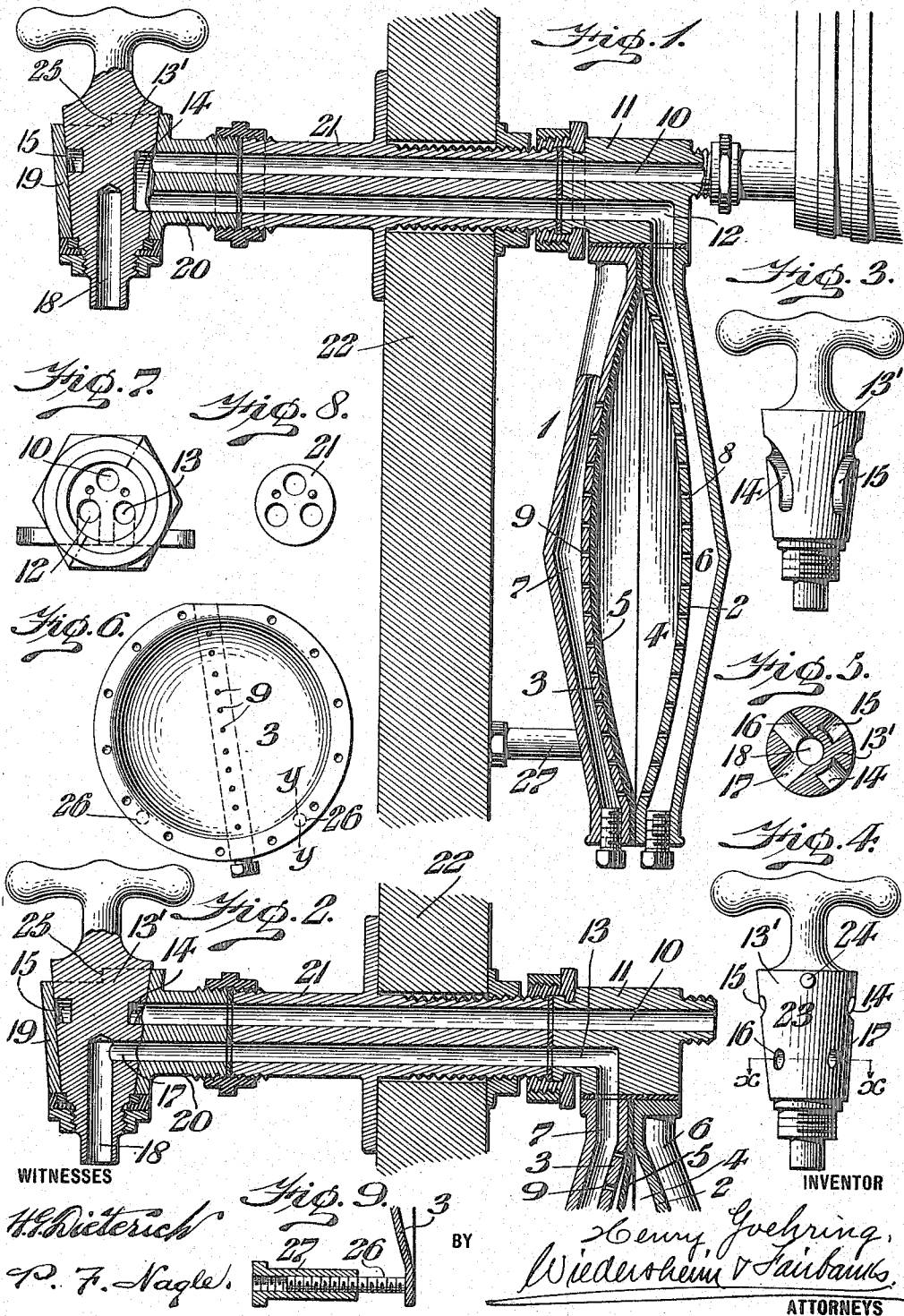


H. GOEHRING.
MEASURING FAUCET.
APPLICATION FILED JAN. 16, 1914.

1,122,270.

Patented Dec. 29, 1914.



UNITED STATES PATENT OFFICE.

HENRY GOEHRING, OF PHILADELPHIA, PENNSYLVANIA.

MEASURING-FAUCET.

1,122,270.

Specification of Letters Patent.

Patented Dec. 29, 1914.

Application filed January 16, 1914. Serial No. 812,419.

To all whom it may concern:

Be it known that I, HENRY GOEHRING, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Measuring-Faucet, of which the following is a specification.

My invention relates to a new and useful measuring faucet, and consists in providing a chamber and means for alternately feeding to and discharging from the opposite sides thereof.

It further consists in providing means for forcing a charge of material from the chamber by the succeeding charge fed thereto.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents an irregular vertical sectional view of a measuring faucet embodying my invention, showing a portion of a support therefor, and a portion of a supply tank, the section being taken through the inlet and one of the passages. Fig. 2 represents an irregular vertical sectional view of a portion of the parts seen in Fig. 1 in the same position and with the section taken slightly to the right, through the inlet and the other passage. Figs. 3 and 4 represents elevations of an operating key employed, from opposite sides thereof. Fig. 5 represents a sectional view on line $x-x$, Fig. 4. Fig. 6 represents an elevation of the interior of one of the sections forming the casing, on a smaller scale. Fig. 7 represents an end elevation of a head employed. Fig. 8 represents an end elevation of a pipe employed. Fig. 9 represents a sectional view on line $y-y$, Fig. 6.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings: 1 designates

a casing, here shown as formed of the two sections 2 and 3, which are adapted to be suitably connected or secured together and forming a chamber 4, which serves as the measuring medium proper. In said chamber, I provide a movable divisional wall 5, here shown as a diaphragm, with the edges thereof suitably clamped between the sections and said diaphragm being capable of moving from one side to the other of said chamber.

6 and 7 designate pipes or passages, one of which, as 6, communicates with said chamber 4 through a port or ports 8, on one side of said diaphragm 5, and the other of which as 7, communicates with said chamber 4 through a port or ports 9 on the opposite side of said diaphragm 5.

10 designates an inlet passage adapted to be in suitable communication with a source of supply of the material to be measured, and I provide means which may normally close said inlet and which may be moved to a position to form a connection for either one or the other of the passages 6 and 7, and when one of said passages is in communication with the said inlet, the other is in communication with a discharge outlet. Any suitable means may be employed to accomplish this, and in the form disclosed, I have formed the inlet passage 10 in a head 11, carried by the casing, 1, and in said head are the two passages 12 and 13, one forming a continuation of the passage 6, and the other forming a continuation of the passage 7.

13' designates a valve-plug which controls the flow of liquid through the various passages and which is provided with the passages 14 and 15, and the ports 16 and 17, each of which is adapted to communicate with a discharge outlet 18, which may be suitably located, as here shown being formed in the valve-plug 13'.

It will be understood that the valve-plug 13' is suitably located to accomplish the desired results and as shown is rotatably mounted in any desired manner, in a casing 19, having a stem 20, suitably connected with a shank 21, which is carried on a support 22, and which shank 21 is connected with said head 11, said stem 20 and shank 21 having corresponding passages therein to form continuations or extensions of the in-

let 10 and the passages 12 and 13 of the head, this construction being one of many which may be employed. The inlet passage 10 is shown in communication with a barrel containing the material to be measured.

The operation of the device is as follows: The valve-plug 13' may be positioned with its wall 23 closing all passages so that the liquid is prevented from flowing and air is prevented from entering passages. By turning the valve-plug 13' in one direction, one of the passages, (depending upon the direction in which the valve-plug is turned) as 14, is brought to register with the inlet port 10 and with the passage 12 so that a communication is formed whereby the liquid will flow through inlet port 10, through passage 14 and passage 12, to the passage 6, and from thence through the port or ports 8 into the chamber 4, and will move the diaphragm or movable wall 5 to the position seen in Fig. 1, so that the chamber 4, will be filled with liquid on one side of the wall 5, it being understood that the said diaphragm in this position closes the port or ports 9, as will be evident. In this position of the valve-plug 13', the port 17 thereof will be in communication with the passage 13, see Fig. 2.

By rotating the valve-plug 13' to the opposite position, the passage 15 will then be brought to register with the inlet port 10 and with the passage 13, while the port 16 will be in register with the passage 12, immediately upon which the liquid will flow through inlet port 10, passage 15 and passage 13, to passage 7, and thence through the port or ports 9 in the chamber 4 against the wall or diaphragm 5, and will move the same over in the direction of the arrow, Fig. 1. This will force out the liquid, heretofore fed, as above described, in the chamber 4, through the ports 8, the passage 6, passage 12 and through port 16 to discharge outlet 18 so that the amount of liquid previously filling the chamber will be fed from the outlet—that is the predetermined amount depending upon the size of the chamber 4. The diaphragm 5 will finally reach a position on the side of the chamber, opposite from that seen in Fig. 1, and the left hand side (in said Fig. 1) will be filled with liquid, and at that time the wall 5 will close the ports 8. By again turning the valve-plug 13' to the opposite position, the passage 14 will be brought to register with the inlet port 10, and the passage 12, and the port 17 of the valve-plug 13' will be in communication with the passage 13, whereupon the material will, as previously described, flow through inlet port 10, passage 14, passage 12 to passage 6, through the ports 8 into the chamber 4, against the opposite side of the diaphragm 5, again moving the same in the chamber to force out the material on the other side thereof through the port or ports

9, passage 7, passage 13, to port 17 to discharge 18, as will be evident. From this it will be understood that the material will be fed alternately to each side of said diaphragm and forcing out the material on the opposite side thereof.

I may employ means for insuring that the valve is in its proper positions to form the communications desired, as here shown I provide a pin 24 on the valve-plug 13' adapted to abut shoulders or stops 25 on the casing 19. In some instances, it may be desirable to provide abutments for the lower portion of the casing to prevent movement thereof, and in the drawings I have shown adjustable abutments carried by the casing and consisting of a screw member 26 and a sleeve 27 which may be relatively movable whereby one of the same may be moved to a position to abut the support, as 22 to assist in holding the casing. As here shown the screw is connected with the section 3 of the casing, and the sleeve is movable on said screw.

It will now be apparent that I have devised a novel and useful construction of a measuring faucet which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a device of the character stated, a measuring casing consisting of two members secured together at their edges to form a chamber and each member formed with a diametric passage in its outer side and communicating with said chamber through ports, a flexible diaphragm clamped with its edges between the edges of said members, and means connected to the passages for alternately admitting and exhausting liquid into and from said passages and alternately at each side of said diaphragm.

2. In a device of the character stated, a measuring casing consisting of two members secured together at their edges to form a chamber and each formed with a passage communicating with said chamber through ports, a flexible diaphragm clamped with its edges between the edges of said members, a head formed with a passage for the inlet-fluid and passages respectively connected to the passages of the casing, a valve casing having a seat into which said passages open, and a valve-plug formed with passages

adapted to alternately connect the inlet passage to one of the passages from the measuring casing and an axial outlet-port and radial ports from the same adapted to alternately register with one of the passages from the measuring casing, said passages and ports being formed to close the passages

and to connect alternately the radial outlet ports to the passages connected to the measuring chamber.

HENRY GOEHRING.

Witnesses:

C. D. McVAY,

H. M. LAFFERTY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."