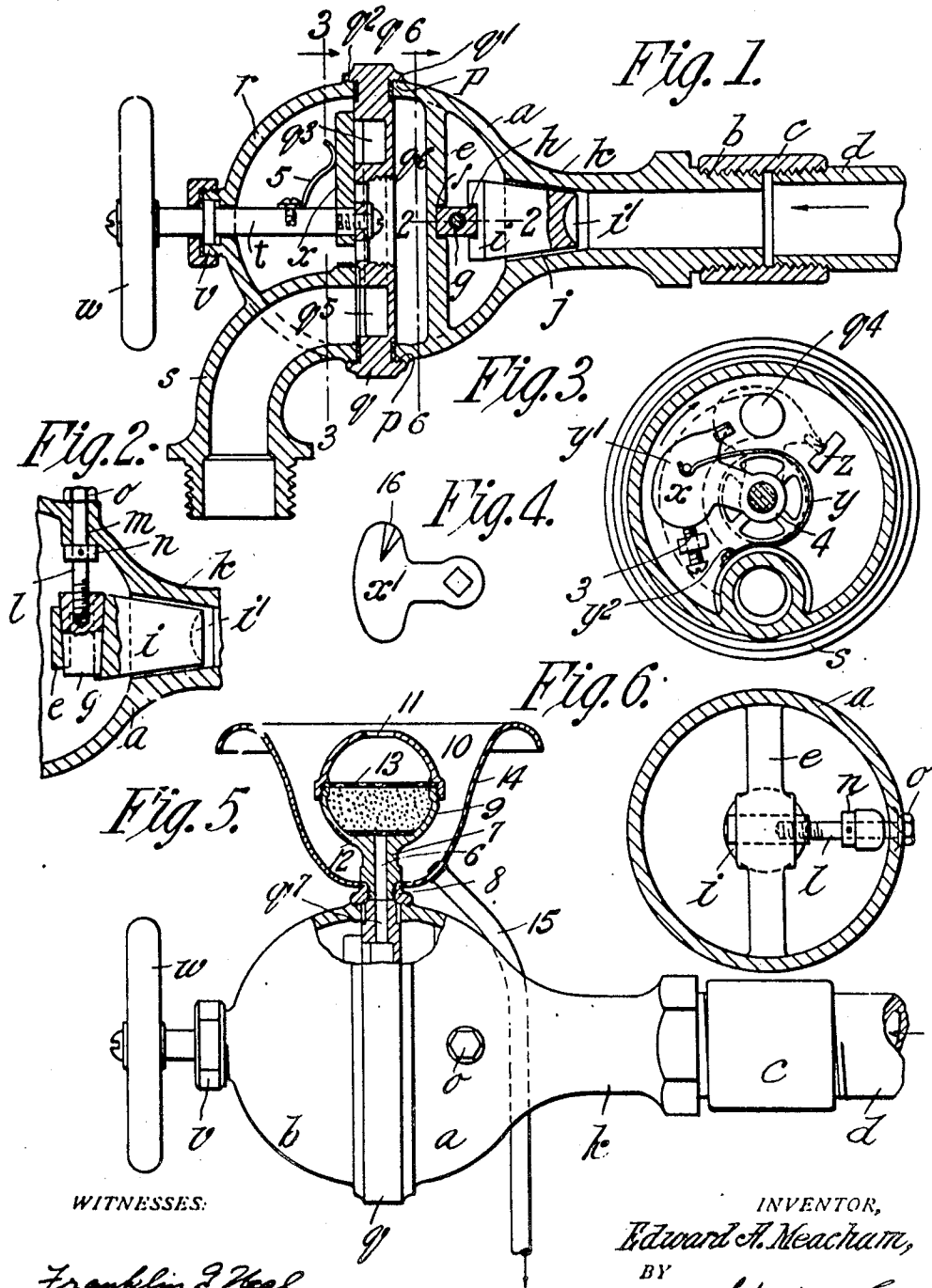


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 COMBINED FAUCET AND DRINKING FOUNTAIN.
 APPLICATION FILED DEC. 30, 1911.

1,050,971.

Patented Jan. 21, 1913.



WITNESSES:

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COMBINED FAUCET AND DRINKING-FOUNTAIN.

1,050,971.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed December 30, 1911. Serial No. 668,681.

To all whom it may concern:

Be it known that I, EDWARD A. MEACHAM, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Combined Faucets and Drinking-Fountains, of which the following is a specification.

This invention relates to improvements in faucets and is also adapted to be combined with a drinking fountain of the bubble type.

The object of the invention is to provide a faucet construction in which the force of the flow of water is broken during its passage therethrough so that a steady stream will issue from the discharge nozzle with very small force.

A further object of the invention is to provide a device whereby the flow of the escaping water can be regulated without regard to the pressure in the main supply pipes.

A further object is to provide a device in which the flow of water may be graduated by means of the operating handle.

A further object is to provide means whereby a drinking fountain may be used instead of the ordinary delivering pipe of the faucet.

In the drawings forming part of this application,—Figure 1 is a longitudinal, sectional view showing the internal construction of the faucet. Fig. 2 is a sectional, detail view of the plug for reducing the flow, the section being taken on the line 2—2 of Fig. 1. Fig. 3 is a transverse sectional view on the line 3—3, Fig. 1, showing the slide valve proper, with a pointed end to vary or graduate the flow through the valve. Fig. 4 is a detail view of a modification of the sliding valve. Fig. 5 is a side elevation showing the drinking fountain attached thereto in place of the regular discharge opening. Fig. 6 is a transverse, sectional view on the line 6—6, of Fig. 1, looking in the direction of the arrow and showing the bridge piece; also the screw for operating the shut-off plug.

Referring to the drawings in detail, a

designates an inner pipe connecting member having the threaded end *b* to which the coupling *c* is attached that threads onto the main *d*, the inner end portion thereof being hemispherical, as shown.

e designates a bar or bridge piece which extends transversely of the member *a* and has a groove *f* formed therein to receive one edge of the wedge-shaped piece *g*. The opposite edge of the wedge-shaped piece *g* engages a groove *h* in the tapered plug *i* which enters a tapered passage-way *j* in the neck part *k*. The forward end of the plug *i* is formed concave, as designated at *i*², so as to more effectively receive the water pressure during the flow to check it.

l designates a screw-stem screw-threaded at its lower end to enter a threaded opening in the top of the wedge-shaped piece *g*. This stem is designed to be operated from the outside of the valve; and to effect this purpose it passes upward through an opening in the casing *a*, as shown in Fig. 2 at *m*. A collar *n* is pinned to the stem and the upper end is provided with a nut-shaped piece *o* whereby the stem may be rotated to raise and lower the wedge-shaped piece, and consequently move the plug *i* nearer its seat in the part *j*, the water pressure serving to hold the plug away from its seat to allow the water to pass. This plug device affords means to vary the flow of water, as readily understood; in fact, it may be used as a shut-off, if desired.

The forward edge of the member *a* is threaded, as shown at *p*, to receive the center-piece *q* which is also threaded on the inner edge, as shown at *q*¹, its opposite inner edge being also threaded, as shown at *q*², to which is secured the outer hemispherical end-piece *r*, which has formed therewith the delivery spout *s*. A valve-stem *t* passes through this end piece, a stuffing-box *v* also being provided to prevent the escape of water around the stem, and a hand wheel *w*, or other device, to operate the stem and its valve. The center-piece *q* is cored out, as shown at *q*³, to form a water passage, the entrance to this cored-out portion being

shown at q^4 , and the delivery end at q^5 , which communicates with the discharge-spout s .

Attached to the stem t is a valve x which normally closes the opening q^4 , being moved forward by means of the spring y , one end of which is attached to the valve at y^1 , and the other to the upper portion of the delivery spout s , as shown at y^2 . An abutment z holds the valve against further forward movement, while a stop 3 limits the rearward movement, as shown in full lines in Fig. 3.

q^6 designates an opening through the center-piece q and through which the water passes after it leaves the plug i . The inner end of the stem t is mounted in the spider construction 4 , so as to form a bearing therefor. A spring 5 is attached to the valve stem t to normally hold the valve to its seat.

It is evident that the valve x may be attached to the inner end of the stem t and placed over the opening q^6 , thus producing a shut-off valve structure. The operation of this valve is as follows: The water, after passing by the plug i , then passes through the opening q^6 when it enters the inner portion of the end-piece r , causing its velocity to be reduced; then it makes a turn and enters the opening q^4 of the center-piece q , then flows around in the cored-out or water passage to the discharge outlet q^5 to the spout s without any danger of forming a spray effect; that is to say, the water escapes from the spout s in a quiet manner.

Referring now to Fig. 5, in which the spout s is omitted and the faucet is used as a drinking fountain: The center-piece q is formed with an opening q^7 which communicates with an opening 6 in the stem 7 , which is connected to the center piece q by means of the threaded connection 8 . The upper end of the stem 7 is provided with a bowl-shaped member 9 to the upper edge of which is threaded a semi-spherical cup-member 10 having an opening 11 in its uppermost portion, through which the water issues in the form of a solid stream or bubble. Located over the upper end of the opening 6 is a screen 12 , and placed between the members 9 and 10 is a second screen 13 , and placed between these two screens is filtering material of any suitable kind, as gravel or charcoal. A cup member 14 is attached to the stem 6 and surrounds and extends above the cup-member 10 . This cup-member is for the purpose of conducting the waste water away or back to a suitable drain-pipe by means of the pipe 15 . It will therefore be seen that by properly adjusting the plug i the flow of water through the outlet openings s and 11 can be properly regulated. Further, it should be stated, that by reason of the large chambers within the parts a and r , and

the circuitous passage of the water before it reaches the outlets, its force is very much reduced causing it to issue in a steady, even flow.

Fig. 4 illustrates a modified valve construction so as to vary the rate of flow. This form of valve is designated by x^1 , and is provided on its inner face side with angular shaped grooves 16 whereby the flow of water, or other fluid, may be regulated, varying, of course, with the position of the valve with relation to the opening q^4 .

What I claim is:—

1. A valve construction comprising inner and outer members, a center-piece for securing said members together, said piece being cored out, the ends of the cored-out portion affording means for the inlet and exit of the fluid, a slide valve for closing the inlet opening, the center-piece having an opening therethrough to permit the fluid to pass, and a plug device to vary the flow from the main source of supply.

2. A valve construction comprising inner and outer members, a center-piece for securing said members together, said piece being cored out, the ends of the cored-out portion affording means for the inlet and exit of the fluid, a slide valve for closing the inlet opening, the center-piece having an opening therethrough to permit the fluid to pass, and a plug device to vary the flow from the main source of supply, and a wedge device to adjust the plug device.

3. In a valve, the combination with inner and outer hemispherical members, a center-piece uniting the same and having an opening therethrough, and a water passage therein, a valve-stem, a valve thereon to open and close the water passage, and means to normally maintain the valve in a closed position.

4. In a valve, the combination with inner and outer hemispherical members, a center-piece uniting the same and having an opening therethrough, and a water passage therein, a valve stem, a valve thereon to open and close the water passage, and means to normally maintain the valve in a closed position, said valve having a tapered or pointed end to graduate the flow.

5. In a valve, the combination with inner and outer hemispherical members, a center-piece uniting the same and having a water passage therein, a valve at one end of the passage to regulate the flow therethrough, and a discharge outlet at the other end of the passage, a bridge-piece in one of the hemispherical members, a plug to break the force of the flow, a wedge device between the bridge-piece and the plug, and a screw means to adjust the wedge device.

6. In a valve, the combination with inner and outer hemispherical members, a center-

piece uniting the same and having a water passage therein, a valve at one end of the passage to regulate the flow therethrough, and a discharge outlet at the other end of the passage, a bridge-piece in one of the hemispherical members, a plug to break the force of the flow, a wedge device between the bridge-piece and the plug, and a screw

means to adjust the wedge device, the inner end of the plug having a concave or cup shaped surface to receive the greater part of the initial pressure.

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Witnesses:

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