

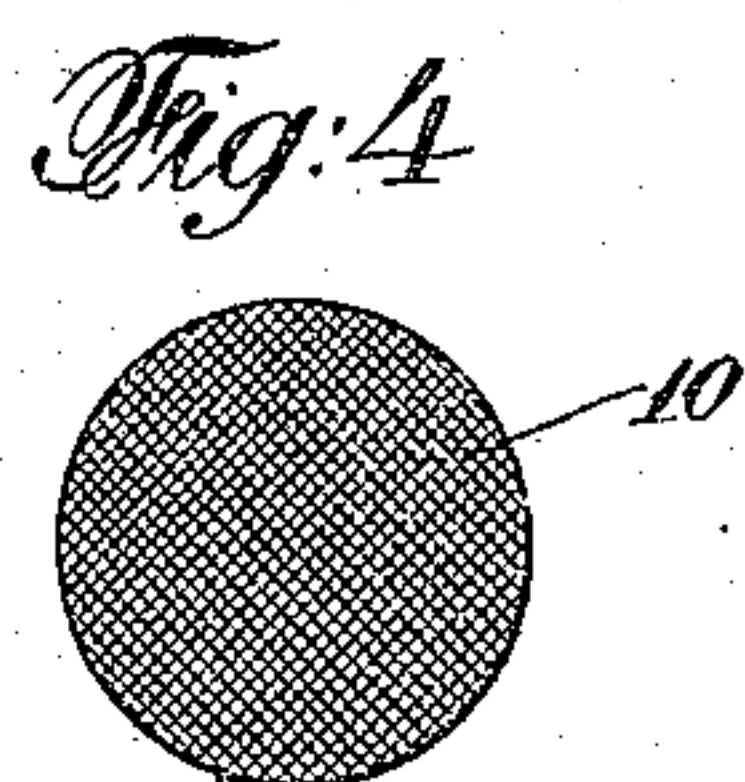
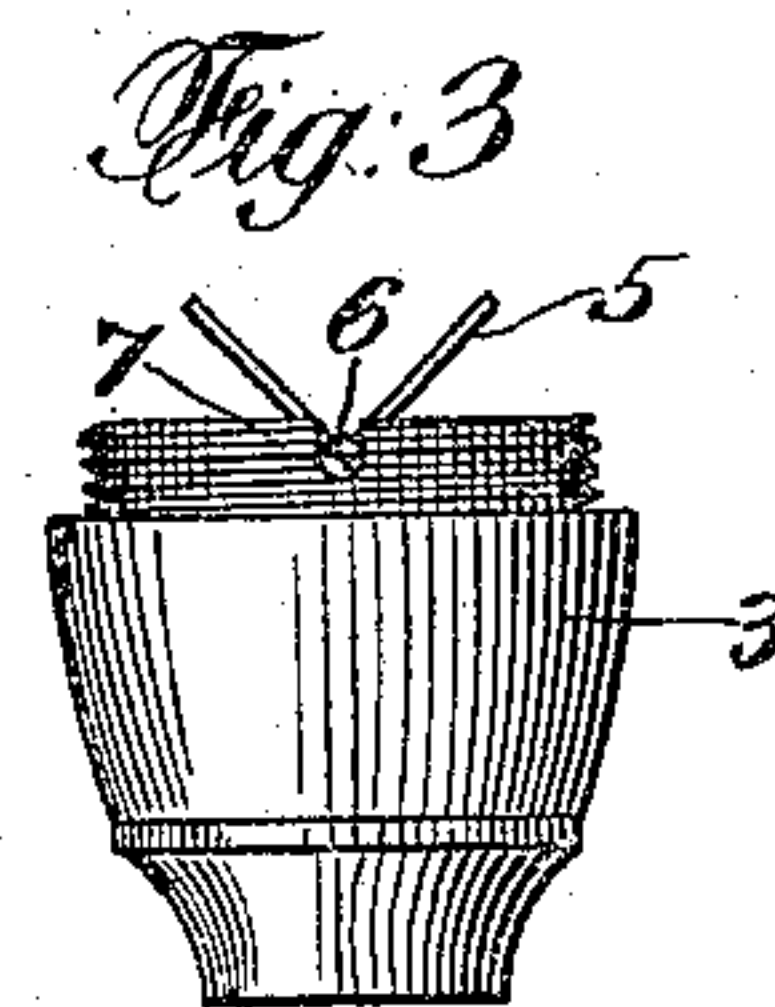
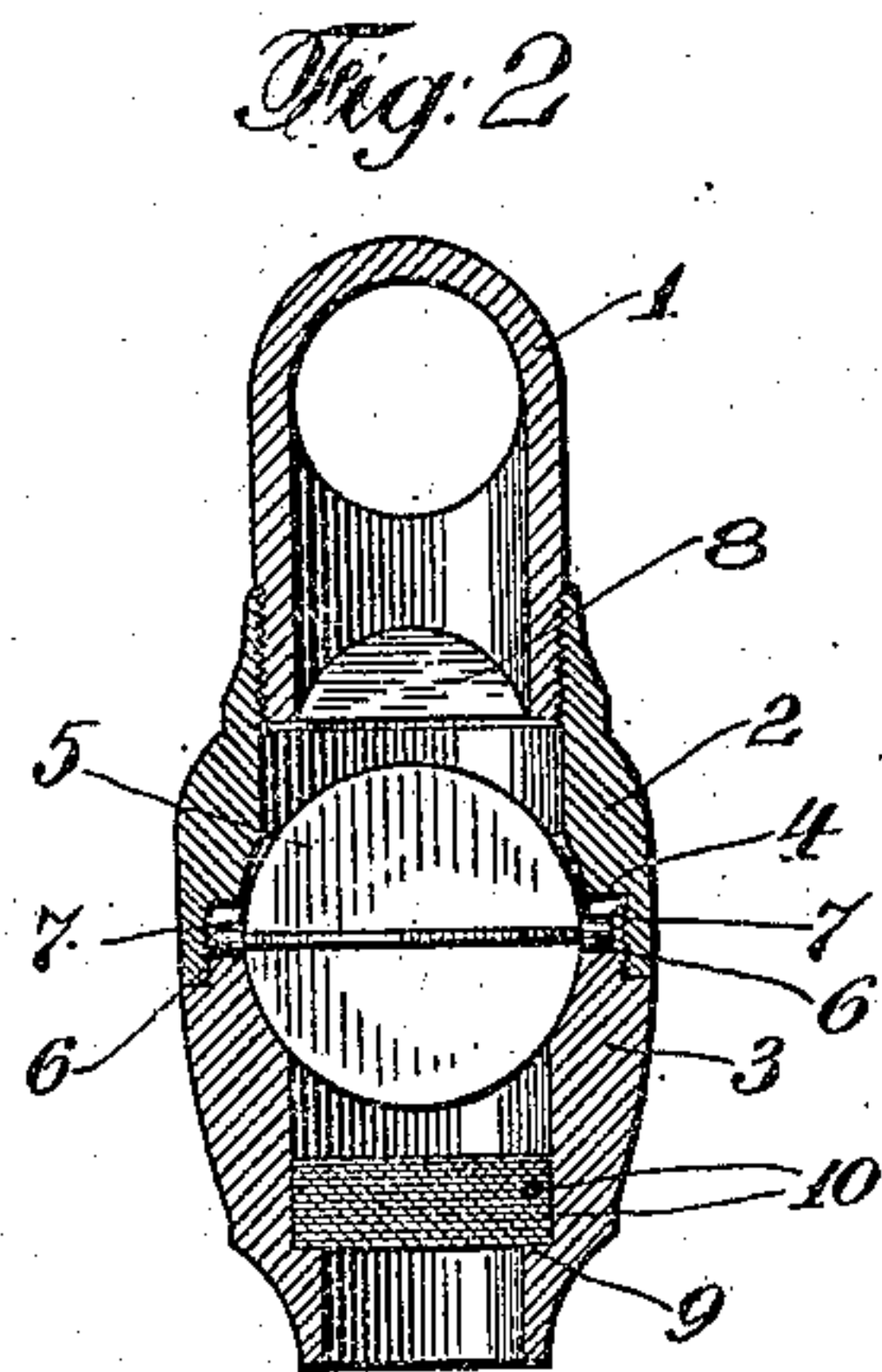
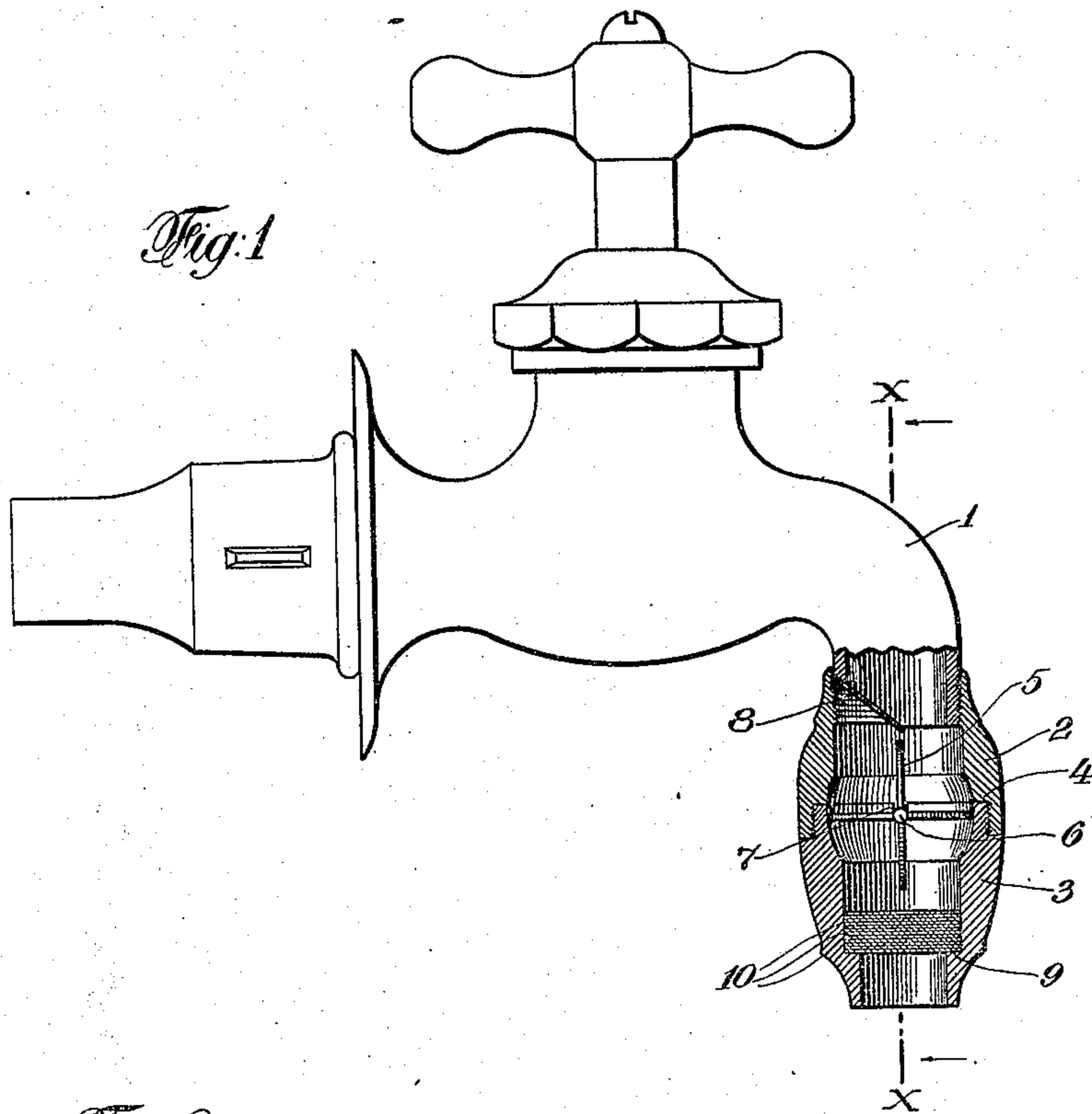
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FAUCET.

APPLICATION FILED APR. 3, 1909.

932,747.

Patented Aug. 31, 1909.



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FAUCET.

932,747.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed April 3, 1909. Serial No. 487,738.

To all whom it may concern:

Be it known that I, MAX BACHRACH, a citizen of the United States, residing in the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Faucets, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

My invention relates to faucets.

It is well known that when several faucets are connected successively to the same conduit or pipe, as, for example, to a water pipe on successive floors of a building, and when water is being drawn on one floor the pressure is thereby so much reduced that little or no water can be obtained on the floors above.

One object of my invention is to regulate the flow of fluid in faucets so that increased pressure causes an increased resistance to the flow of fluid, whereby a substantially constant delivery may be obtained with considerable variations in pressure and, as in the example above cited, the faucets of the different floors will deliver fluid at a substantially constant rate under all conditions of use.

Another object of my invention is to provide for the filtration of a fluid in connection with the regulation of its delivery.

Another object is to prevent spattering of the fluid.

Other objects and advantages of my invention will appear from the following description.

I shall now describe my invention with reference to the accompanying drawings and shall thereafter point out my invention in claims.

Figure 1 is an elevation of a faucet embodying my invention with the extended end and cap in section. Fig. 2 is a vertical sectional elevation, taken on a plane indicated by the line $x-x$, Fig. 1, looking toward the left. Fig. 3 is a detail elevation of the cap removed from the faucet with the regulating wheel in place. Fig. 4 is a detail face view of a filtering disk on an enlarged scale.

In the embodiment shown, the faucet 1 has an enlarged end or extension 2, which is shown as screwed thereon and which has at its lower end a screw-threaded socket receiving the reduced and threaded upper end of the cap 3, the extension 2 and the

cap 3 being shown as fitting together exteriorly so as to form a smooth and flush finish and also fitting together interiorly in like manner.

A regulating wheel 5 is fitted to rotate on trunnions 6 entering the open bearings 7 at right angles to each other and this regulating wheel contains vanes shown as composed of four semi-circular arms arranged at right angles to each other and this regulating wheel is rotated by the water in the manner of a simple water wheel, a deflector 8 being soldered or otherwise secured in the faucet passage above the regulating wheel to direct the water so that it will rotate the regulating wheel.

The cap 3 has its interior side walls in proximity to the regulating wheel made convex in the arcs of circles substantially concentric with the regulating wheel, and the trunnions of the regulating wheel have considerable freedom in their bearings so that the vanes of the regulating wheel press at their peripheral edges directly against the convex inner wall of the cap, thereby developing a friction proportional to the pressure which is exerted upon them by the water flowing through the faucet. When, therefore, the pressure of the water increases, the frictional resistance of the regulating wheel also increases and, consequently, the wheel effectively regulates and governs the discharge of water so that variations of pressure will not materially affect the rate of discharge of the fluid from the faucet, and the faucets subjected to the heavier pressures will not discharge at an abnormally rapid rate and the faucets subjected to the lighter pressures will receive a supply of fluid and will discharge at substantially normal rates. The delivery of the fluid is further regulated by the resistance of a plurality of fine wire gauze disks 10, which are superimposed one on another against a shoulder 9 near the lower end of the cap and below the regulating wheel 5. I employ a considerable number of these disks 10 and find that twelve disks well serve the purpose. These disks not only perform a regulating function, but also filter the water flowing through them and prevent spattering.

The regulating wheel and disks, or either of them, may be readily removed at any time for cleaning or for repair or replacement, the simple operation of unscrewing

the cap affording access to the interior of the device, and the regulating wheel being removable from the cap when the cap is unscrewed, as shown in Fig. 3.

5 I have described this faucet as used in connection with water conduits, but obviously it may be employed in connection with any fluid to which its use is adapted.

10 It is obvious that modifications may be made in the construction shown and above particularly described within the principle and scope of my invention.

I claim:

1. In combination with a faucet, a regulating wheel for controlling the speed of
15 delivery of the fluid from the faucet, such regulating wheel being located in the faucet passage and rotatable on an axis transverse to the direction of flow of the fluid and having
20 ing vanes arranged so as to be rotated by the fluid flowing through the faucet passage, the vanes having a frictional contact with the inner walls of the faucet in arcs of contact including a small portion only of the cir-
25 cumference of rotation.

2. In combination with a faucet, a regulating wheel rotatable on its axis transverse to the direction of flow of the fluid and having
30 vanes thereon located in the path of the fluid and combined with the walls of the faucet so as to develop an increased resistance with increased pressure of the fluid.

3. In combination with a faucet, a regulating wheel rotatable on an axis transverse

to the direction of flow of the fluid and having
35 ing vanes thereon located in the path of the fluid and combined with the walls of the faucet so as to develop an increased resistance with increased pressure of the fluid, and
40 a deflector to direct the fluid on the wheel.

4. In combination with a faucet, a cap thereon and a regulating wheel rotatable on
trunnions having bearings in the cap at its
junction with the faucet.

5. In combination with a faucet, a cap
45 thereon, a regulating wheel rotatable on trunnions having bearings in the cap, and a plurality of finely meshed filtering screens seated against a shoulder of the cap beyond
50 the regulating wheel.

6. In combination with a faucet, a cap
thereon, a regulating wheel rotatable on
trunnions having loose bearings in the cap
at its juncture with the faucet, the regu-
55 lating wheel having vanes thereon located in the path of the fluid and having frictional contact with the inner walls of the faucet, a plurality of finely meshed filtering screens seated against a shoulder of the cap beyond
60 the regulating wheel, and a deflector to direct the fluid on the wheel.

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

MAX BACHRACH.

Witnesses:

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