Sept. 11, 1956 M. ORWIN 2,762,387

MULTIPLE-OUTLET SILL COCK UNIT

Filed Jan. 23, 1953

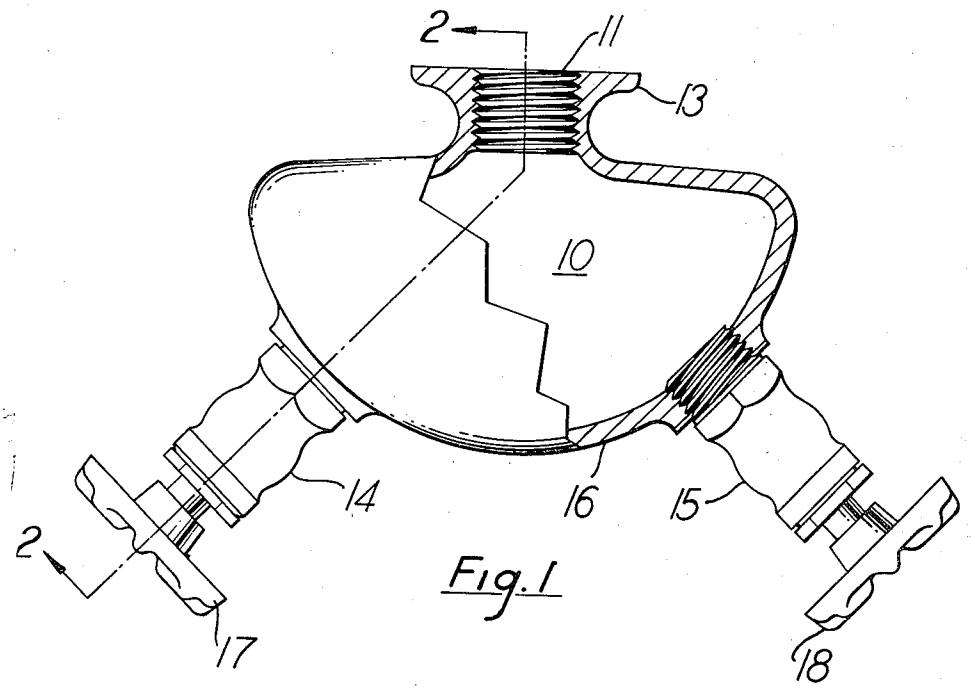


Fig. 1

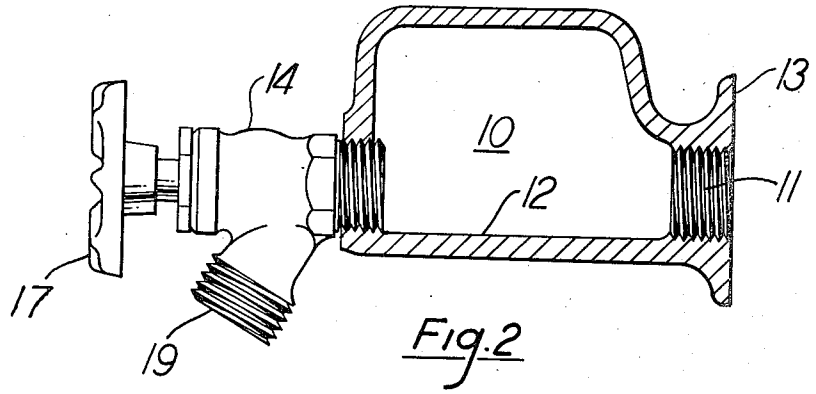


Fig. 2

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United States Patent Office 2,762,387 Patented Sept. 11, 1956

2,762,387

MULTIPLE-OUTLET SILL COCK UNIT

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Application January 23, 1953, Serial No. 332,876
1 Claim. (Cl. 137—360)

The present invention relates to the construction of sill cocks, a "sill cock" being a valve-controlled outlet adapted for connection to the pipe usually found in close proximity to the sill of a house to form a hose connection. It is often desirable to connect a series of water-consuming units for operation at the same time, such as a plurality of sprinklers, or a sprinkler and a water-conducting cleaning brush for scrubbing such things as the exterior of a house, an automobile, or sidewalk surfaces. The usual pipe carrying water from the central distributing point in the house to the sill cock is of such a capacity as to conduct at adequate pressure a considerable amount of flow in excess of the capacity of the usual hose. An ordinary valve unit contains several points of flow restriction and sudden changes in flow direction, resulting in a rather large pressure drop. For this reason, it is not practical to attach a multiple-outlet unit to an installed conventional single sill cock valve outlet, since the resulting arrangement will cause an unduly large pressure drop and result in inadequate flow in the several water-conducting units.

The present invention provides a distribution chamber connected directly to the water pipe, with sufficient area in the chamber to supply water at adequate pressure to all parts of the chamber. The portion of the device opposite from the point of connection to the pipe is formed in an arcuate contour to provide room for a plurality of valve-controlled outlets. This arcuate formation permits a rather small chamber to be utilized while still providing adequate space for manual operation of the valves. This feature is due to the fact that the substantially radial arrangement of the valves permits the inner ends of these units to be much closer together than the spacing requirements necessary at the control end. The inlet to the distribution chamber is preferably tangential to the normally lowermost portion of the chamber in order to permit drainage and prevent damage from freezing.

In addition to the spacing advantages resulting in a relatively small distribution chamber for a given clearance at the control ends of the valves, the arcuate formation of the distribution chamber permits fundamentally the same chamber to be used with a variety of valve unit arrangements. If desired, the threaded openings for receiving the outlet valves may be machined as required into standard distribution chamber castings. If it is desirable to provide thickened areas in the walls of the chamber surrounding these threaded openings, the present invention will result in the use of less molding equipment that would be necessary if the entire unit had to be revised for each variation in the arrangement or number of valves associated with each distribution chamber.

The several features of the present invention will be analysed in detail through a discussion of the particular embodiments illustrated in the accompanying drawing. In the drawing,

Figure 1 presents a plan view of a device embodying the present invention, with a section broken away to show the interior construction.

Figure 2 is a section taken on the plane 2—2 of Figure 1.

Referring to the drawing, a distribution chamber generally indicated at **10** is preferably formed as a cast unit,

and has an intake **11** which is preferably tangent to the lowermost side **12** of the distribution chamber **10**. The threaded opening **11** is intended to be screwed on to the end of a water pipe, with the formed section **13** forming a pleasing configuration in conjunction with the surface of the house against which it will be positioned on the completion of the installation.

Water entering through the inlet will proceed to fill the distribution chamber **10** and provide adequate pressure opposite the intake openings of the valve units **14** and **15**, which are threaded into openings also shown as tangent to the lower most side **12** of the distribution chamber **10** in the outwardly-convex surface **16** of the side of the distribution chamber opposite from the intake **11**. The tangential arrangement of the inlet and outlets facilitates complete drainage of the unit and thereby avoids freezing. The manual control knobs **17** and **18** for the valves **14** and **15**, respectively, are spaced at a substantial distance apart, providing adequate clearance for their manual operation. In spite of this spacing, the intake ends of these valves are close enough together to permit the use of a relatively small casting to form the distribution chamber **10**. With this arrangement, the contents of the pipe to which the distribution chamber unit is connected will be supplied to the valves **14** and **15** without substantial drop in pressure, the cross-sectional area of the chamber **10** being sufficient to permit the ready movement of water without substantial resistance. Water-consuming units can then be connected to the outlet openings as indicated at **19** in Figure 2, and these units will be provided with a flow of water at a very slight reduction in pressure from that in the supply pipe.

The particular embodiments of the present invention which have been illustrated and discussed herein are for illustrative purposes only and are not to be considered as a limitation upon the scope of the appended claim. In the claim, it is my intention to claim the entire invention disclosed herein, except as I am limited by the prior art.

I claim:

In combination with a water pipe extending horizontally through a building wall, a multiple outlet sill-cock unit comprising a unitary housing having an upper wall, a substantially plane horizontal lower wall, a rear wall providing a vertical flange abutting said building wall, and an outwardly convex arcuate forward wall, said rear wall containing an inlet port extending through said flange and connected to said pipe, said port being disposed remote from said upper wall and substantially tangent to said lower wall, said forward wall containing a plurality of outlet ports having axes substantially normal to said forward wall, said outlet ports being substantially tangent to said lower wall, and in a common plane with the axis of said inlet port, and a valved fitting in each of said outlet ports, each said fitting having an outlet at least as low as said plane and each said fitting providing a valve stem having an axis substantially normal to said forward wall and radiating outwardly therefrom.

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