

Jan. 17, 1928.

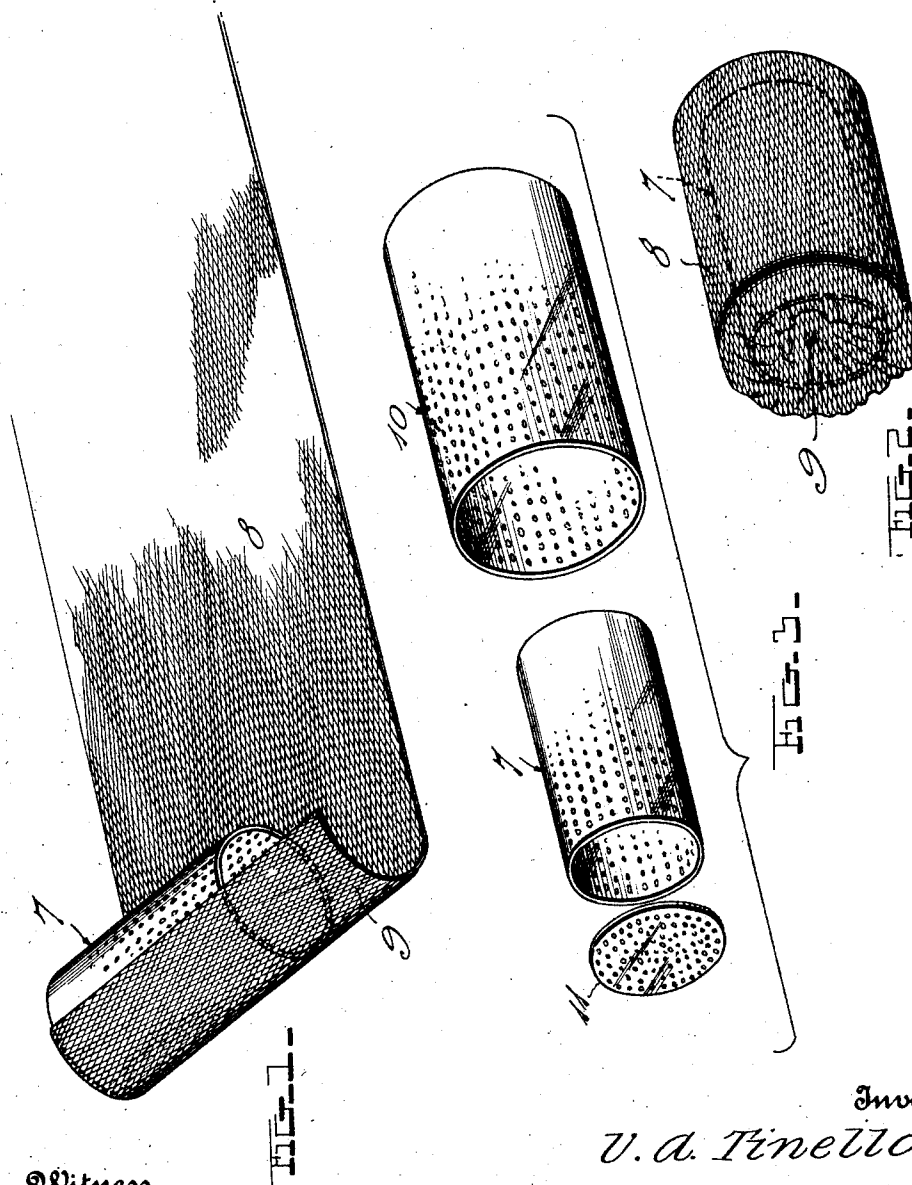
V. A. TINELLO

1,656,455

FILTER

Filed March 10, 1927

2 Sheets-Sheet 1



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FIG. 4.

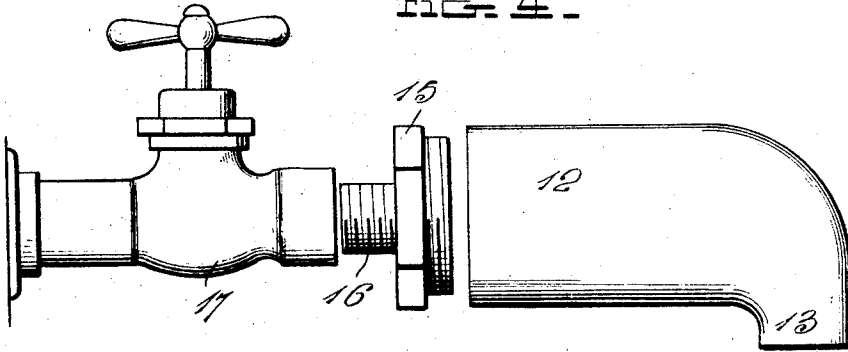


FIG. 5.

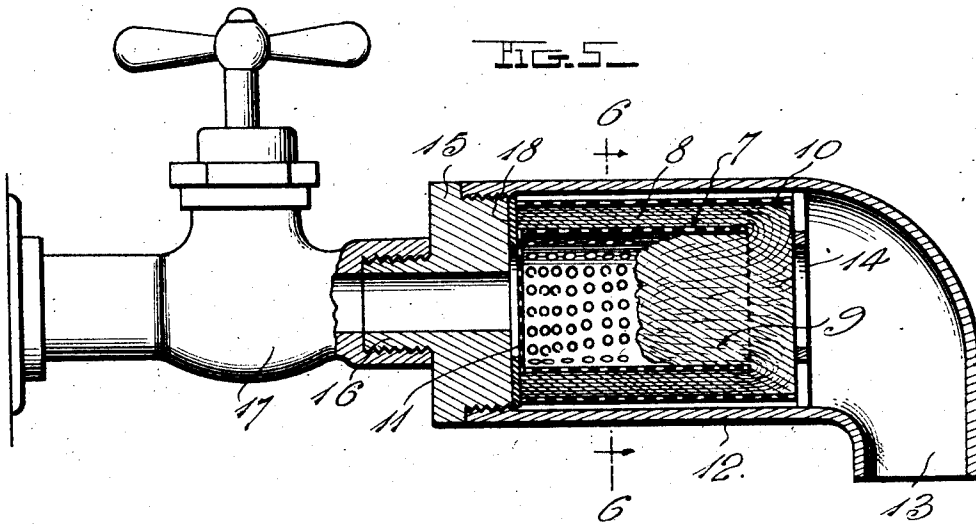
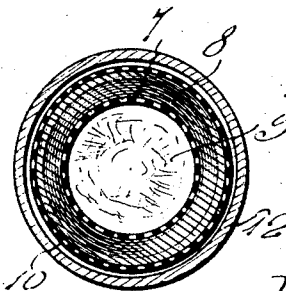


FIG. 6.



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UNITED STATES PATENT OFFICE.

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FILTER.

Application filed March 10, 1927. Serial No. 174,243.

The invention relates to improvements in filters, such as those designed primarily for use in filtering water.

The principal object of the invention is to provide a filtering insert of novel construction, for insertion into a filter casing to effectively filter all liquid passing there-through, the construction of the insert being such that it may be easily and inexpensively manufactured, may be easily positioned within the filter casing, and will be unusually efficient.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, the description being supplemented by the accompanying drawings.

Fig. 1 is a perspective view illustrating one of the steps in the construction of the filtering insert.

Fig. 2 is a perspective view of the filtering insert in a condition which, in the present disclosure of the invention, is only a partially completed condition.

Fig. 3 is a perspective view of the two open-work cylinders and an open-work end plate which are employed in the construction of the filtering unit.

Fig. 4 is a side elevation with parts disassembled, showing the casing for the filtering unit and the associated spigot.

Fig. 5 is a longitudinal sectional view showing the filtering unit confined within the casing.

Fig. 6 is a transverse sectional view on line 6—6 of Fig. 5.

In the drawings above briefly described, the numeral 7 designates an open-work cylinder, preferably formed of perforated metal, of such quality that it will resist rusting or corrosion.

The numeral 8 denotes a textile fabric strip which is circumferentially wound a plurality of times around the cylinder 7, said strip being of a width considerably greater than the length of said cylinder. Thus, when one edge of the strip is placed substantially flush with one end of the cylinder and said strip is wound as above described, a surplus of fabric 9 will exist at the other end of said cylinder, and this surplus is inwardly turned and stuffed into the last named cylinder end, as will be clear from Figs. 2, 5 and 6.

An outer, open-work cylinder or sleeve 10, of greater diameter and length than the

cylinder 7, preferably surrounds the wrapped fabric strip and holds all parts in assembled relation.

In the preferred construction, an open-work plate or disk 11 is provided at the end of the cylinder 7, remote from the surplus fabric 9, and in the embodiment herein illustrated, said disk or plate constitutes a screen for the inlet end of the cylinder 7.

A casing is provided to contain the filtering unit above described. This casing, shown in Figs. 4, 5 and 6, embodies a cylindrical wall 12 having an outlet spout 13 at one end and a transverse spider or the like 14 near said end. The other end of the casing wall 12 has threaded engagement with a closure 15, which closure is provided with a threaded inlet nipple 16 for engagement with the outlet of a faucet 17.

When the filtering unit is in place within the casing, the end of said unit provided with the surplus of textile material 9, abuts the spider 14, and a washer 18 may well be interposed between the opposite end of said unit and the closure 15. The disk or plate 11 may then be held between this washer and the adjacent end of the inner cylinder 7, and the outer cylinder 10 is then preferably spaced a slight distance from the casing wall.

Due to the novel construction shown and described, the water or other liquid must pass both through the open-work members and through a number of thicknesses of textile fabric, and a great deal of the water will flow edgewise of the fabric strip, that is longitudinally between the cylinders 7 and 10. Hence, effective filtering will be produced. Obviously, some of the liquid will also ooze through the inturned surplus of textile material 9 and will be effectively filtered thereby.

As excellent results are obtainable from the general construction shown, it is preferably followed. However, within the scope of the invention as claimed, variations may of course be made.

Obviously, when the filter becomes totally or partially clogged, the filtering unit or insert may be removed and readily cleaned and may have a new strip of fabric substituted for the strip previously used. Then, when this unit is replaced, the filter will function as efficiently as if entirely new.

I claim:—

1. A filter comprising a casing having a

central water inlet at one end and a water outlet, one open-work hollow cylinder in said casing having an end communicating with said inlet and the other end with said outlet, and a strip of textile fabric wrapped a plurality of times around the circumference of said cylinder, said strip being of a width greater than the length of the cylinder, providing a surplus of fabric at the other end of the cylinder, said other end being open, said surplus of fabric being turned inwardly and stuffed into the cylinder through said open end.

2. A filtering insert comprising an open-work hollow cylinder, and a strip of textile fabric circumferentially wrapped a plurality of times around said cylinder, the aforesaid cylinder being open at one end, said

fabric strip being of a width greater than the length of the cylinder, providing a surplus of fabric at said open end of the cylinder, said surplus of fabric being inwardly turned and stuffed into said open end of the cylinder.

3. A structure as specified in claim 2; together with an open-work sleeve surrounding the wrapped fabric.

4. A filtering insert embodying textile fabric applied to the outer side of an open-work cylinder and stuffed into and completely filling an end thereof said stuffed fabric forming additional filtering means.

In testimony whereof I have hereunto affixed my signature.

VITO ANTONIO TINELLO.