

No. 643,463.

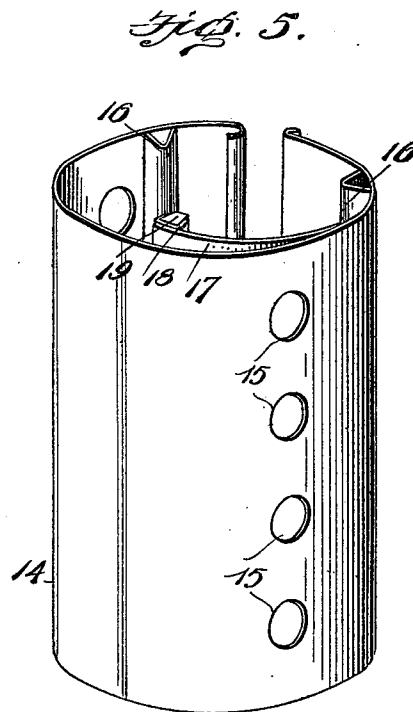
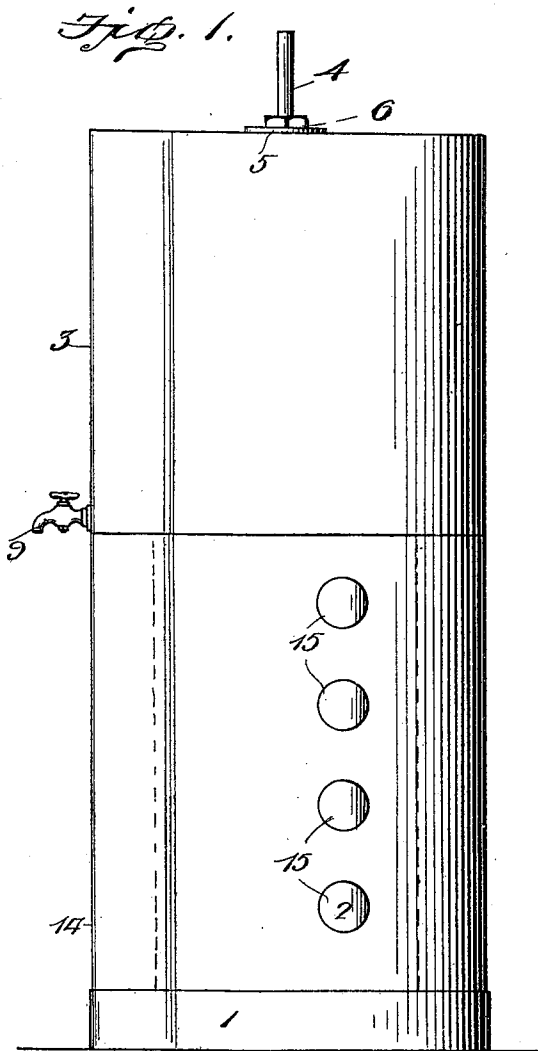
Patented Feb. 13, 1900.

D. J. BLISS.
SUBMERGED FILTER.

(Application filed Aug. 8, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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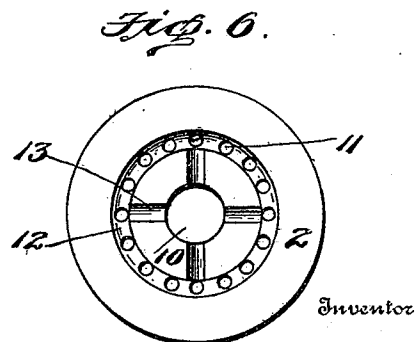
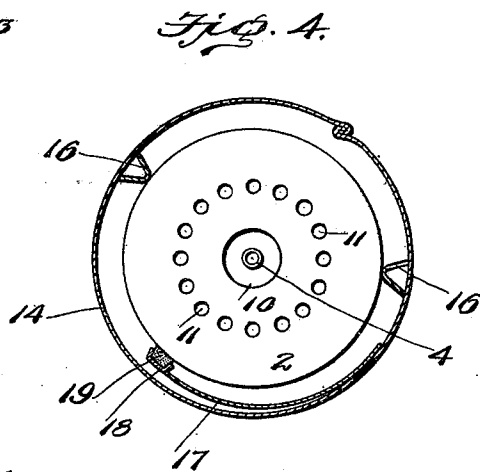
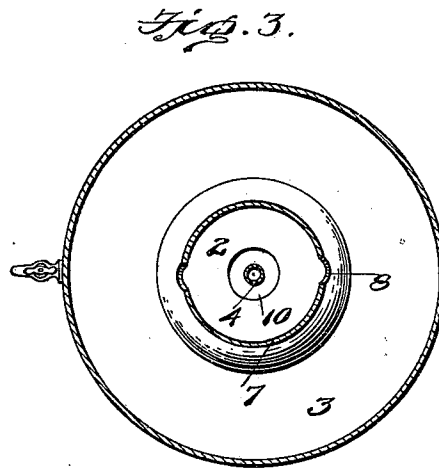
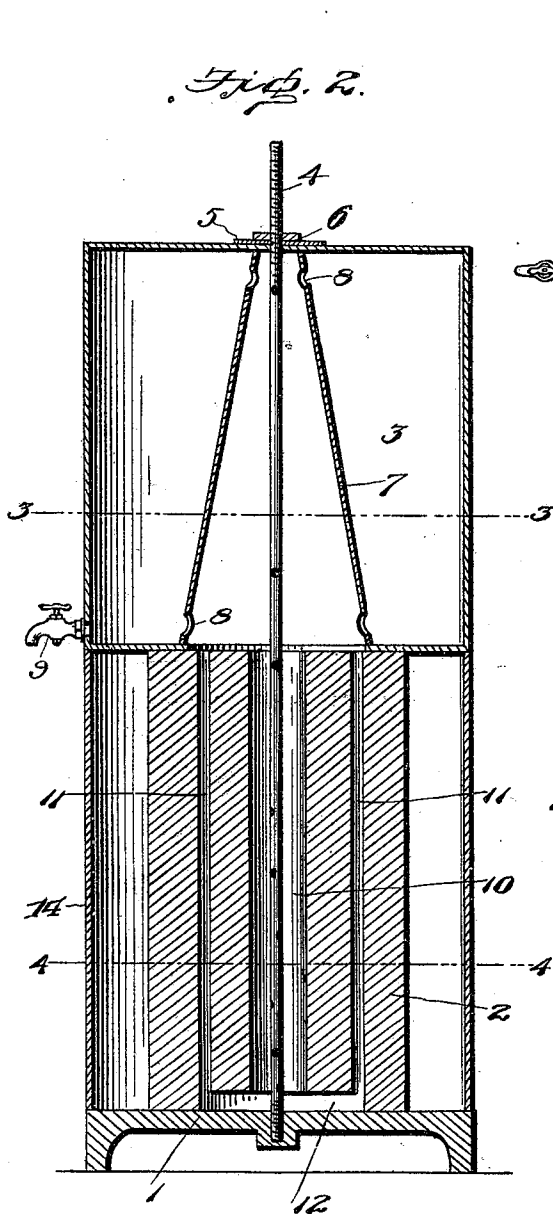
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

DWIGHT J. BLISS, OF CARTHAGE, MISSOURI.

SUBMERGED FILTER.

SPECIFICATION forming part of Letters Patent No. 643,463, dated February 13, 1900.

Application filed August 8, 1899. Serial No. 726,552. (No model.)

To all whom it may concern:

Be it known that I, DWIGHT J. BLISS, a citizen of the United States, residing at Carthage, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Submerged Filters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in water-filters; and the object is to provide a simple, inexpensive, and effective device of this character.

To these ends the invention consists in the construction, combination, and arrangement of the several parts of the device, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same reference characters indicate the same parts of the device.

Figure 1 is a side elevation of my improved submerged filter. Fig. 2 is a vertical central section of the same. Fig. 3 is a horizontal section on the line 3 3 of Fig. 2. Fig. 4 is a similar view on the line 4 4 of Fig. 2. Fig. 5 is a detail perspective view of the cleaner-shield. Fig. 6 is a bottom plan view of the filtering-stone.

1 denotes the base, on which the cylindrical filtering-stone 2 rests, and 3 denotes the superimposed filtered-water tank.

4 denotes the tubular rod or pipe extending into the center of the base, the filtering-stone, and tank, and it is provided with a cap 5 and lock-nut 6 to clamp or secure the members together, and 7 denotes a cone-shaped brace extending from the top of the filtering-stone to the top of the filtered-water tank, which acts as a brace for the tank, and it is provided with a series of orifices 8 8 to permit of the free circulation of the water, the filtered water being drawn from the tank through the faucet 9.

The filtering-stone is preferably cylindrical and is formed with an enlarged axial passage 10 and a concentric series of conduits 11 11, which are connected at their lower ends by the annular groove 12 and with the central passage 10 by the radial grooves 13.

14 denotes the cleaner-shield, which encompasses the filtering-stone, and it is pro-

vided with the orifices 15 15 to permit the free circulation of the water about the filtering-cylinder. It is also provided with internal longitudinal ribs 16 16 to keep the shield from coming in contact with the filtering-stone and with a transverse spring-metal arm 17, the free end of which carries a sheet-metal clamp 18, in which is fixed a cleaner-stone 19, which has a bearing longitudinally on the outside face of the filter-cylinder for cleaning purposes.

In operation the filter is submerged by means of the pipe 4 in a barrel, well, or cistern, the air in the tank passing out through the pipe and the water passing through the filter-stone and soon filling the tank 3. The filter is then raised and the filtered water withdrawn from the tank by means of the cock 9.

In practice it will be found convenient to keep the filter-shield 14 in place on the filter-stone to form a shield or protector for it, and when the surface of the stone becomes clogged it may be readily cleansed by simply rotating the shield by hand and dipping the filter in a bucket of water to wash off the foreign matter.

It will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus fully described the invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A submerged filter comprising the filtering-cylinder, the superimposed tank, the cone-shaped brace and the tubular rod adapted to secure the stone, tank and brace together, substantially as and for the purpose set forth.

2. In combination, the cylindrical filtering-stone, the superimposed tank, and the cleaner-shield encompassing said stone, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DWIGHT J. BLISS.

Witnesses:

THOS. HACKNEY,
W. E. WHITE.