J. H. Carter,

Water-Filter,

No. 25,805. Patented Oct. 18, 1859.

Fig. 3.

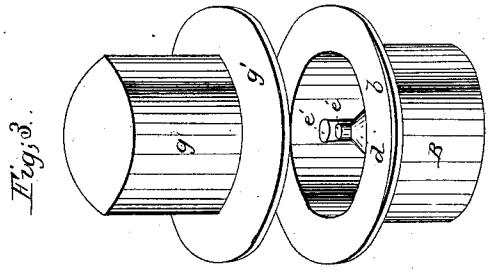


Fig. 1.

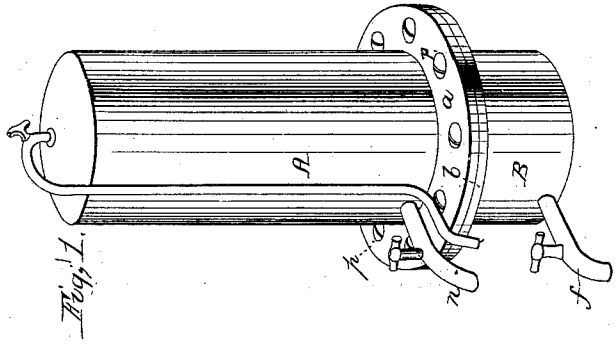
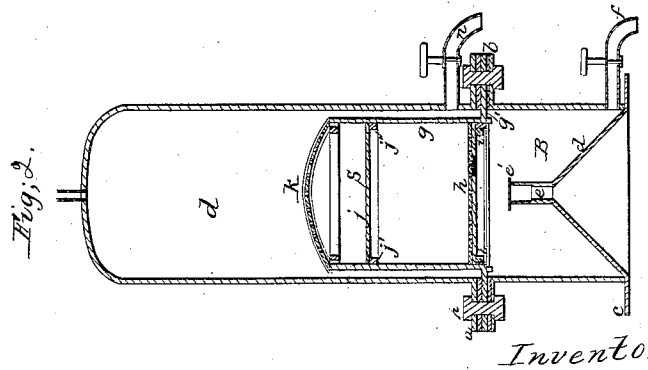


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

JOHN H. CARTER, OF CINCINNATI, OHIO.

CONSTRUCTION OF HYDRANTS FOR FILTRATION.

Specification of Letters Patent No. 25,805, dated October 18, 1859.

To all whom it may concern:

Be it known that I, JOHN H. CARTER, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Filtering-Hydrants; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon and made to form a part of this specification.

My invention is an improvement in hydrants by means of which I am enabled to filter the water, as it is received from the pipes, and, discharge it, as required for use, properly filtered and freed from sediment, as hereinafter set forth and represented.

In reference to the accompanying drawings, Figure 1, is a perspective view of the filtering hydrant, showing the same as being arranged for use. Fig. 2, is a vertical sectional view of the same. Fig. 3, is a perspective view of the filter and receiver.

(A) represents the shell of the upper portion of the hydrant, the lower portion of which is formed with an annular projecting flange (*a*). (B) is the shell of the lower portion or receiver of the hydrant, its upper end being provided or formed with a flange (*b*), and its lower end with a flange (*c*) which affords facilities for securing the base of the hydrant. Secured to the base of the receiver, is a conical elevation (*d*) having in its center, a tube (*e*) through which water may be admitted to the receiver (B.) Upon the top of said tube (*e*) is a cap (*e'*) by means of which water is prevented from being forced directly against the filter; the pipe or tube (*e*) being open upon either side below the cap (*e'*) so as to allow the water to escape into the receiver (B) as shown clearly in Fig. 3. By means of this arrangement, a large portion of the impurities contained in the water will be precipitated to the bottom of said receiver, before the water comes in contact with the filter, and by means of the cock (*f*) the sediment, and impurities contained in the water, and which may be deposited at the bottom of the receiver, may be discharged, whenever it may be desired to cleanse the said receiver.

(*g*) is a cylinder formed open at the top and bottom, and having a flange (*g'*) which is adapted to fit between the flanges (*a*) and (*b*) by means of which said cylinder may be secured in its proper place for use and removable; in such manner that there shall be a space around and between it and the shell (A) within which it is arranged.

(*h*) is a perforated disk made to fit closely within the cylinder (*g*) and may be secured therein by means of the ring (*i*) and rods (*i'*) which are secured to said cylinder, directly under said disk (*h*) and drawn tightly across it, is a piece of woolen cloth (*l*). The said cylinder (*g*) will then be filled with fine granulated charcoal, between the disk (*h*) and the strainer (*j*) which is of woolen cloth, and secured by means of the ring (*j'*).

(*k*) is a perforated cap, lined and covered with cotton flannel, or other suitable material as clearly shown in Fig. 3.

(*m*) is a waste water pipe, communicating with the upper portion (A) or reservoir of the hydrant.

(*n*) is a cock by means of which the filtered water may be withdrawn from the hydrant.

The filter being properly prepared as before described, it will be inserted within the shell or reservoir (A) as shown in Fig. 3, having suitable packing between its flange (*g'*) and the flange (*a*) of said reservoir, and also between its said flange (*g'*) and the flange of the receiver (B), the whole will then be secured firmly together, by means of bolts (*p*).

The hydrant being properly arranged for use the water will pass up through the pipe (*e*) strike against the cap (*e'*) and be thereby deflected downward as before described. As the receiver (B) becomes filled, the water will be forced up, first through the strainer (*l*) then through the granulated charcoal, then through the second strainer (*j*) then through the space (*s*) which will be filled with fine, washed sand, and then through the perforated cap (*k*) and its cotton flannel. The cotton flannel, being very close and firmly woven, serves to retain any impurities in the water, or, any particles of coal that may be forced up through the sand.

Having described the construction and operation of my invention, what I claim as my invention and desire to secure by Letters Patent, is

The cylindrical inner vessel (*g*) within the case A, and made removable as represented in combination with the receiver B, for receiving the sediment as described, and the cap, *e'*, for favoring the direction of the sediment downward in the manner and for the purpose set forth.

In testimony of which invention I have hereunto set my hand.

JOHN H. CARTER.

Witnesses:
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