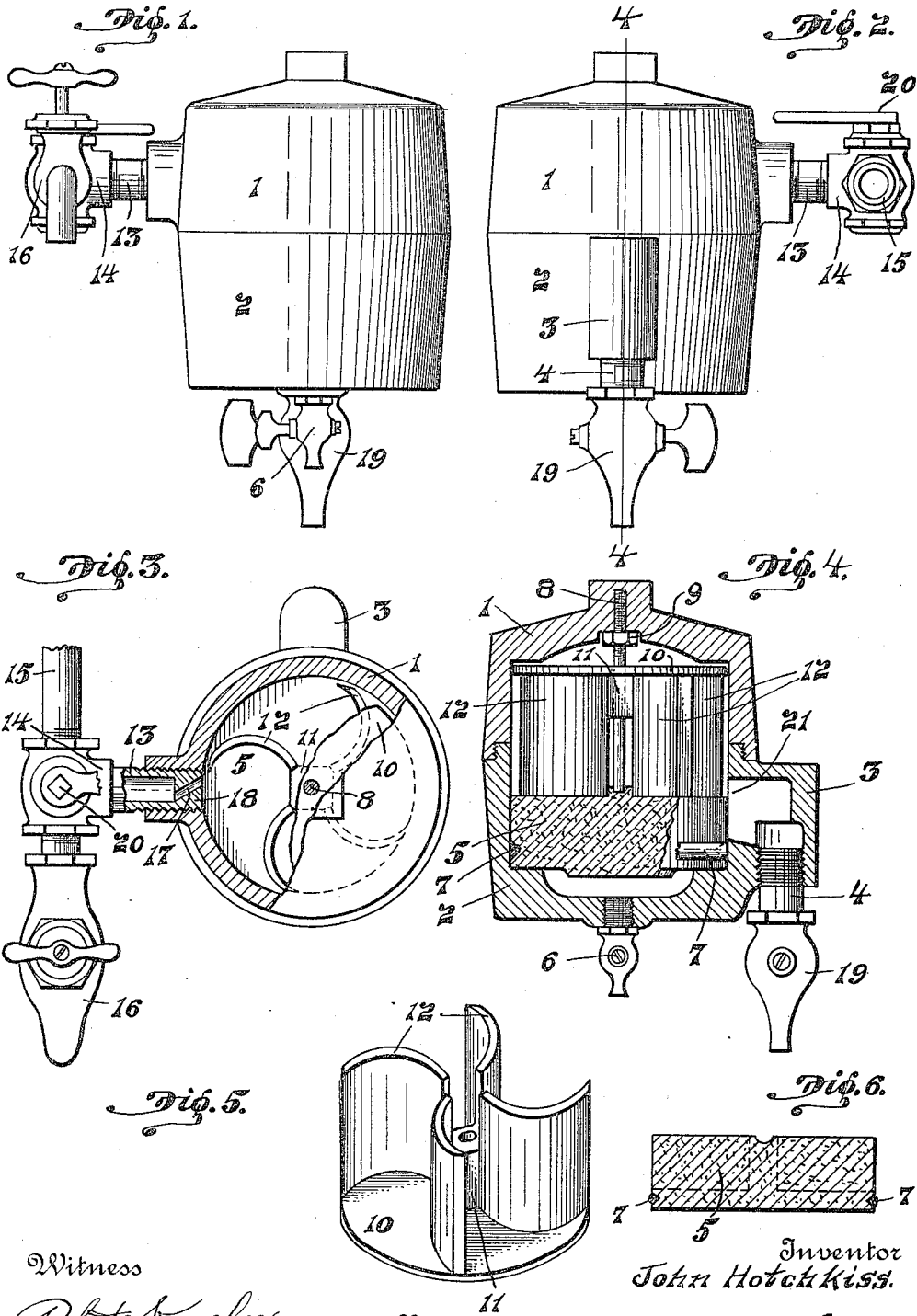


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 FILTER.  
 APPLICATION FILED MAY 3, 1915.

1,153,920.

Patented Sept. 21, 1915.



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## FILTER.

1,153,920.

Specification of Letters Patent. Patented Sept. 21, 1915.

Application filed May 3, 1915. Serial No. 25,340.

*To all whom it may concern:*

Be it known that I, JOHN HOTCHKISS, a citizen of the United States, residing at Sebring, in the county of Mahoning and State of Ohio, have invented a new and useful Filter, of which the following is a specification.

My invention relates to filters designed to be used in dwelling houses, hotels and like places.

The object of the present invention is, first, to provide a filter of cheap construction, second, to provide means for preventing the intake surface of the filter from becoming coated, and third, to provide for the outlet of water which may in any way become contaminated, regardless of the wearing away or cutting down of the filter. These objects, together with other objects readily apparent to those skilled in the art, may be attained by the construction illustrated in the accompanying drawings, although the invention may be embodied in other forms, the construction illustrated being chosen by way of example.

In the accompanying drawing: Figure 1 is a front side elevation. Fig. 2 is a rear side elevation. Fig. 3 is a top view showing parts in section. Fig. 4 is a section on line 4—4, Fig. 2. Fig. 5 is a detached view of the rotary scraper. Fig. 6 is a sectional view of the filter stone showing the shape in full lines before worn, and in dotted lines after it is worn.

Similar numerals of reference indicate corresponding parts in all the figures of the drawing.

In the accompanying drawing, 1 represents the upper case and 2 the lower case, said upper and lower casings being preferably connected together by screw threads. The lower casing member 2 is provided with the chambered flange 3, to which is attached the faucet pipe 4. The filter stone 5 is located in the lower portion of the casing 2 and is spaced from the bottom as best illustrated in Fig. 4. For the purpose of preventing unfiltered water from finding its way to the filter faucet 6 the gasket 7 is provided.

To the upper casing 1 is attached the spindle 8 which is held against displacement and in fixed adjustment by means of the jam-nut 9. Upon the spindle 8 is rotatably mounted the disk 10 and the hub 11. To the disk 10 and the hub 11 are connected the

convexo-concave scraper blades 12, which are formed of a length greater than the length of the hub 11, by which arrangement the inner edges of the scraper blades 12 are spaced from each other for the purposes hereinafter described. To the casing 1 is attached the intake pipe 13, which intake pipe is connected to the valve head 14 or its equivalent, to which valve head is connected the supply pipe 15, which supply pipe is connected to the water supply in the usual manner. If desired, a faucet 16 may be attached to the valve head 14 or its equivalent. The intake pipe 13 is provided with the inclined passage 17, which inclined passage is located through the closed end 18 of the supply pipe 13. The purpose of inclining the passage 17 at an angle to a radial line is to cause the flow of water to enter the casing 1 in such manner that it will strike against the concaved sides of the scraper blades 12.

It will be understood that when the faucet 19 is opened and the valve 20 turned in position to permit water to enter the chamber that a flow of water will pass through said chamber, the same entering through the passage 17 and passing out through the passage or opening 21 and the faucet 19. At this time a rotary motion will be imparted to the scraper blades 12, and owing to the fact that the scraper blades are supported upon the filter stone 5, a cleaning or scraping action will take place.

The purpose of forming the scraper blades 12 convexo-concave is, first, to provide concaved faces against which the water is forced, and second, to provide convexed scraping edges by which arrangement a shearing action upon the filter stone is produced. It will be understood that as the filter stone is worn away the scraper blades, together with the disk 10 and hub 11 will follow down upon the spindle 8, but owing to the fact that the scraper blades are spaced apart at their inner vertical edges the filter stone will not be worn away, or in other words a core will be formed and the top or upper end of the core support and steady the spindle 8, by which arrangement there is no movement of the spindle 8, at any time. The scraper blades 12, the disk 10 and the hub 11 should be formed of suitable metal and of sufficient weight to properly scrape the top or upper face of the filter stone.

It will be understood that after the water has passed through the filter stone it can

be withdrawn for any purpose from the faucet 6. It will also be understood that when the faucet 19 is closed there will be no rotary action of the scraper blades, owing to the fact that the water cannot escape from the scraper blade chamber or the chamber above this filter stone, hence the water is permitted to percolate through the filter stone. The lateral chambered flange 3 should be formed of a length somewhat greater than the width of the filter stone so that when a new filter stone is placed in position the water is free to pass into said lateral chamber at all times regardless of the thickness of the filter stone.

Having fully described my invention what I claim as new and desire to secure by Letters Patent, is—

1. In a filter, the combination of a casing, a filter stone located in the lower portion of the casing and spaced from the bottom thereof, a spindle located above the filter stone and in contact with said filter stone, scraper blades rotatably mounted upon the spindle, said scraper blades spaced apart at their inner edges and from the spindle, a supply

pipe provided with an inclined passage, said passage located above the filter stone, a chambered flange, the chamber thereof communicating with the chamber of the main casing, said chamber extended above the upper face of the filter stone.

2. In a filter of the class described, the combination of a filter casing, a filter stone located within the casing and spaced from the bottom thereof, a spindle adjustably connected to the upper portion of the filter casing, said spindle located above the filter stone, a chambered flange located at one side of the filter casing, the chamber of said flange communicating with the chamber of the filter casing, convexo-concave scraper blades rotatably mounted upon the spindle and above the filter stone, the lower ends of said scraper blades adapted for contact with the upper face of the filter stone, said scraper blades spaced apart at their inner vertical edges, and a supply pipe located above the filter stone.

In testimony that I claim the above, I have hereunto subscribed my name.

JOHN HOTCHKISS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."