

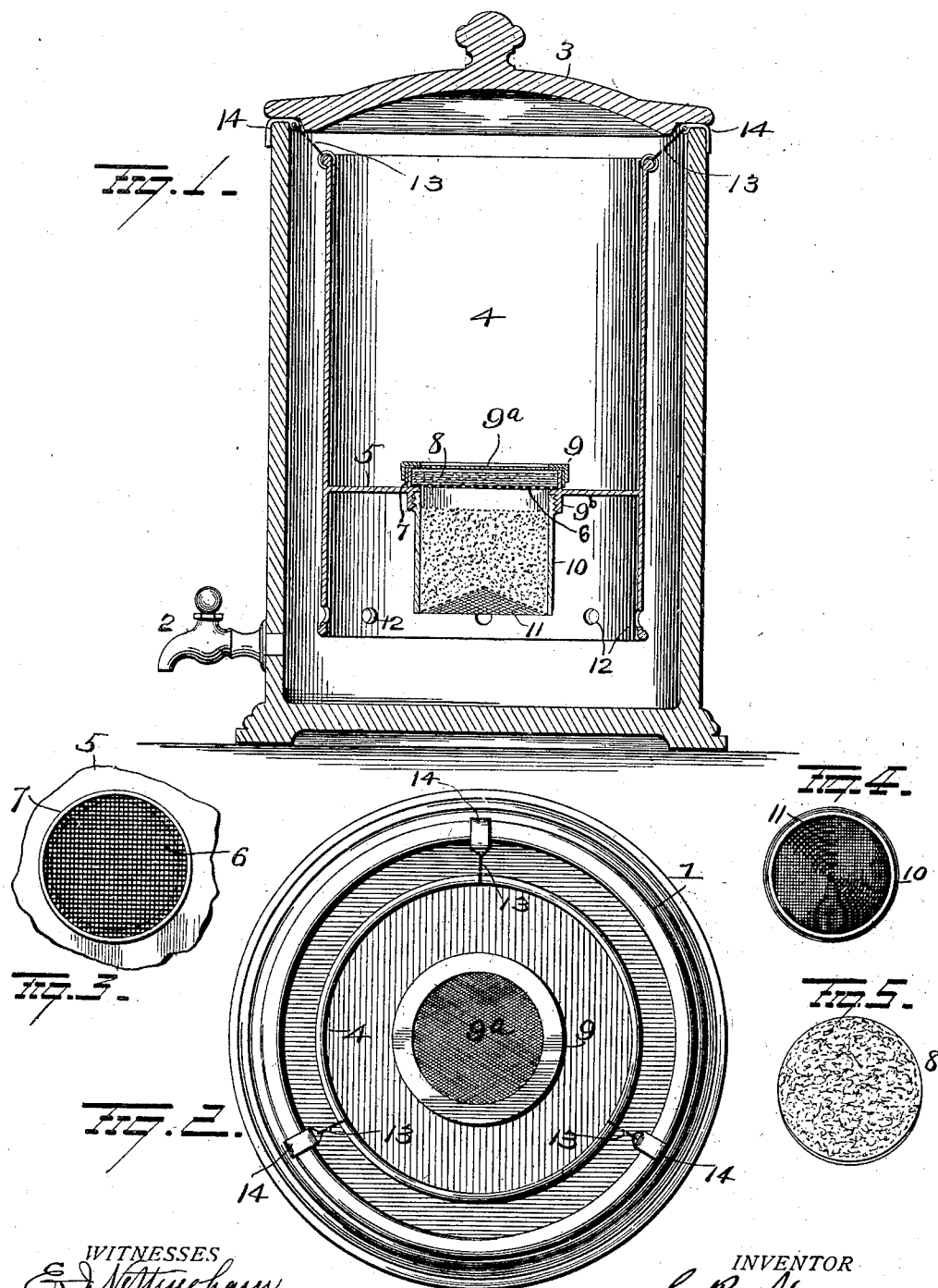
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Patented May 27, 1902.

C. R. HARRIS.
FILTER.

(Application filed July 9, 1901.)

(No Model.)



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FILTER.

SPECIFICATION forming part of Letters Patent No. 700,916, dated May 27, 1902.

Application filed July 9, 1901. Serial No. 67,640. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. HARRIS, a resident of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Filters; and I do hereby 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 an improvement in filters, and more particularly to a filter for water-coolers, the object of the invention being to provide a filter which can be employed in receptacles of various sizes and shapes and which will effectually filter the water passing through the same.

A further object is to provide a filter of this character which will be extremely simple in construction, cheap to manufacture, and easily cleaned when dirty.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in section illustrating my improvements. Fig. 2 is a top view with the cover removed; and Figs. 3, 4, and 5 are views of details of construction.

1 represents an ordinary water-cooler provided with a spigot 2 near its bottom and closed at its top by a cover 3.

4 represents the filter, which comprises a cylindrical casing open at its top and bottom and provided between its ends with a partition 5, forming the bottom of the unfiltered-water chamber and having a central opening covered by a coarse wire-netting 6, secured to the partition and adapted to prevent sagging of the asbestos sheets 8 thereon, as will now be explained. Around this opening on the upper side of the partition a ring 7 is secured and is adapted to receive a filling of thin asbestos sheets 8, held securely in ring 7 by an angle-ring 9, sprung over the top of the same, and over the top of the asbestos sheets 8 a fine linen cloth 9^a is held by ring 9.

Around the opening in partition 5 a screw-threaded ring 9^b depends from the latter, and a cylindrical filtering-chamber 10 is screwed

into said ring and has provided in its lower end a convex bottom 11, composed of fine wire mesh, the casing 10 being filled with fine sea sand and animal charcoal, and owing to this convex bottom the sand and charcoal cannot pack in the fine mesh to interfere with the passage of the water. This casing 10 does not extend quite to the bottom of casing 4, so that when the latter is supported directly on the bottom of the cooler, bucket, or other receptacle the filtered water can escape from casing 10, and openings 12 are made in casing 4 near its bottom through which the filtered water passes. However, whenever practicable, I prefer to support the filter as shown in the accompanying drawings, as will now be explained.

Two, three, or more chains or wires 13, located equidistant apart, are secured at one end to the top of casing 4 and are provided at their free ends with hooks 14 to engage the top edge of the cooler or other receptacle, but not interfere with the placing of the cover 3 thereon. By employing these chains 13 and hooks 14 for supporting the filter the latter will be centered in the cooler and will fit a great variety of shapes and sizes of receptacles.

In operation the ice and unfiltered water are placed in the filter on top of partition 5, and the water finds its way through cloth 9^a and sheets of asbestos 8 into the sand and charcoal in casing 10, through which it filters and passes into the bottom of the cooler not only filtered but cold, and will be maintained cold by its contact with casing 4 containing the ice. After the filter has been used for some time the cloth 9^a and top sheet of asbestos 8 can be removed, a new cloth placed in position, and the filter thus be made ready for further use. It will be seen that the filter will work properly for a great length of time without a new supply of asbestos sheets, and when they have been exhausted one by one they can be replenished at small cost. The sand and charcoal in casing 10 can be cleaned in any well-known manner, a simple way being to stir it up, so as to allow the collection of dirt to be washed out, or a new supply of sand and charcoal can be placed in casing 10.

The filter can be made of any of a great many materials and in a great many shapes

and sizes, and owing to its simplicity of construction and inexpensive material employed can be placed on the market at an extremely-low price.

5 Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I
10 do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a filter, the combination with a casing divided by a partition into two chambers one
20 for filtered and the other for unfiltered water, a screened opening in said partition, a receptacle for filtering material secured to partition below the screened opening therein and a series of asbestos sheets removably secured
25 over said screened opening.

2. A filter comprising a water-chamber having a bottom therein, filtering material supported by said bottom and chains or cords

secured to the upper end of the filter and hooks on the free ends of said chains or cords
30 to hook over the edge of a receptacle and support the filter.

3. In a filter, the combination with a water-chamber having a bottom with an opening therein covered by a screen, of a ring secured
35 on said bottom around the opening therein, a series of sheets of asbestos in said ring, a clamping-ring securing a cloth covering over said asbestos sheets, a screw-threaded ring secured around the opening on the under side
40 of the bottom, and a receptacle for filtering material screwed onto said last-mentioned ring and having convex wire-netting bottom.

4. A filter comprising a receptacle for unfiltered water, means therein for filtering the
45 water, and chains secured to the top of the filter and hooks on the chains for supporting the filter in a receptacle.

In testimony whereof I have signed this specification in the presence of two subscrib-
50 ing witnesses.

CHAS. R. HARRIS.

Witnesses:

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