

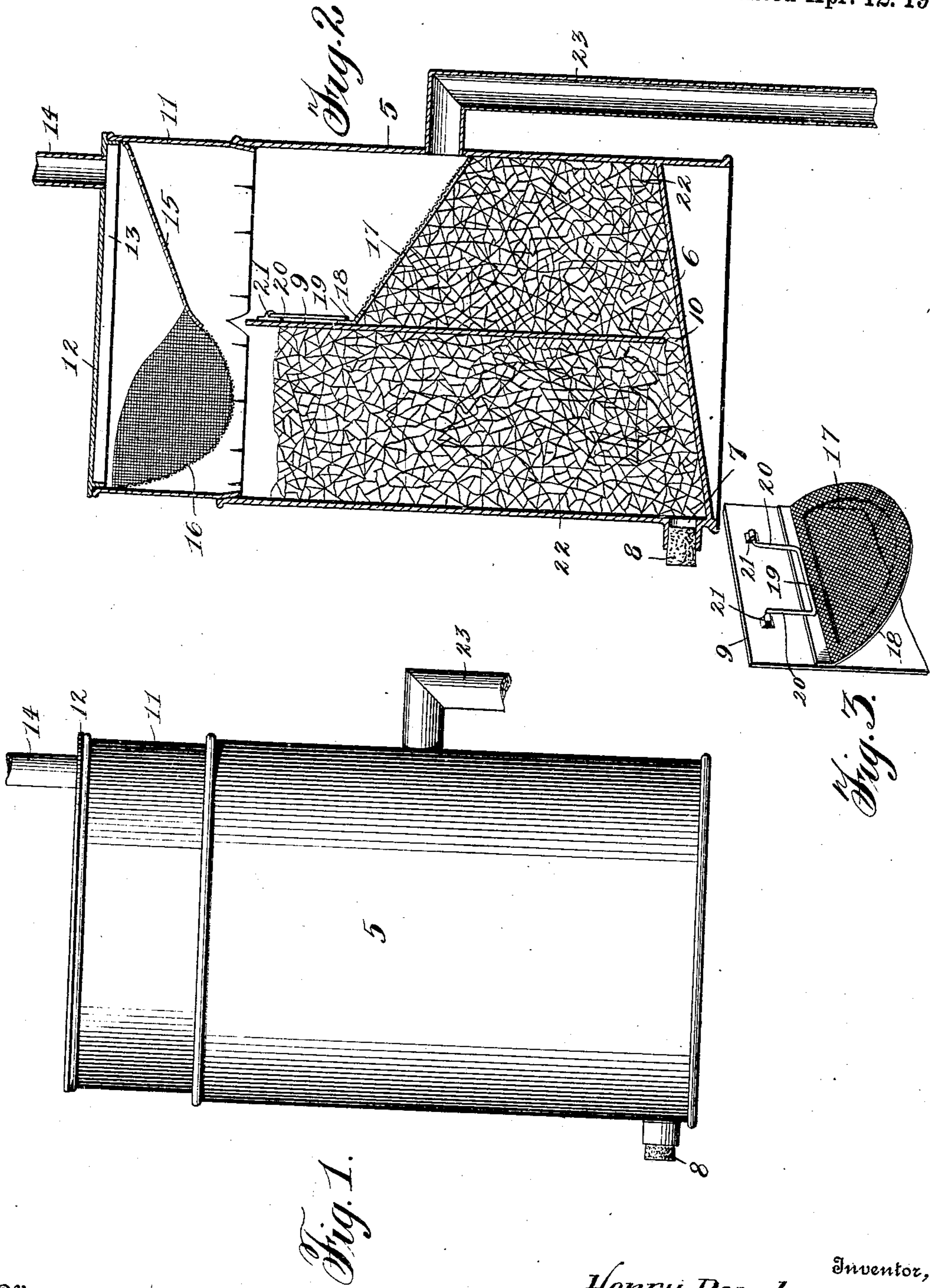
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FILTER.

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954,647.

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UNITED STATES PATENT OFFICE.

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FILTER.

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To all whom it may concern:

Be it known that I, HENRY POND, a citizen of the United States of America, residing at Metz, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Filters, of which the following is a specification.

My invention relates to filters and more particularly to filters for cisterns, the object of the invention being to provide a filter of this character constructed in such manner as to efficiently filter water during its passage from a downspout to a cistern, the filter being constructed in such manner that it may be readily cleansed when desired.

Further objects and advantages of the invention will be set forth in the detailed description which now follows:

In the accompanying drawing, Figure 1 is a side elevation of a filter constructed in accordance with the invention, Fig. 2 is a vertical section thereof, and, Fig. 3 is a detail perspective view illustrating the manner in which one of the screens is removably mounted in the filter.

Like numerals designate corresponding parts in all of the figures of the drawing.

Referring to the drawing, the numeral 5 designates the main body of the filter. This body has an inclined bottom 6 which slopes toward a cleanout opening 7, said opening being normally closed by a plug 8. This plug may be made of any desired material, such for instance as cork or lead, or any other non-corrodible material. By employing a plug of this character, the many annoyances arising where threaded plugs are used, from the rusting and corrosion of the threads thereof, are avoided. Spanning the body 5 is a division web 9, this division web extending vertically through the body 5 but terminating short of the bottom 6 to leave a passage 10 between its lower edge and said bottom.

Fitting within the otherwise open upper end of the body 5 is a screen carrying ring 11. A removable cap 12 having an annular flange 13 which fits down inside of the ring 11 forms a closure for the top of the filter. The downspout 14 discharges through the cap 12, the water from said downspout striking against an inclined deflector plate 15 and being directed by said deflector plate over upon and into a bowl-like screen 16, both the plate 15 and the screen 16 being carried by the ring 11 and being removable with said ring.

Upon the opposite side of the web 9 from the screen 16, is a second screen 17. This screen has a semi-circular supporting frame 18 to which a keeper 19 is soldered. This keeper is formed of resilient wire and its free ends tend to spring apart. The web 9 carries perforated ears 21 into which the ends of this keeper spring. It will therefore be seen that if the ends of the keeper are forced together, said keeper and the screen 17 may be lifted from the filter after the ring 11 and the cap 12 have been removed. The space within the body 5, beneath the screens 16 and 17, is filled with charcoal or other filtering material 22 and a discharge pipe 23 leads from that portion of the body 5 above the screen 17 to the cistern, not shown.

It is believed that the operation of the device will be apparent from the foregoing description. However, it may be briefly stated that the water passes through the downspout 14 and strikes upon the deflector plate 15, being directed by said deflector plate over upon and into the screen 16. It has been found that where the incoming water strikes directly upon a screen, the force of the water acts to drive many of the fine particles of matter through the screen, that would not pass through the screen if the water flowed gently over the screen, and it is the purpose of the deflector plate 15 to break the force of the water by changing its direction of flow in the manner set forth, the result of this being to cause the water to flow gently into the screen 16, whence it passes through the filtering material 22 upon the left hand side of the web 9 in Fig. 2, thence through the passage 10 and up through the filtering material upon the right hand side of the web 9, through the screen 17, and then through the overflow and discharge pipe 23 to the cistern, not shown. The inclined bottom 6 in combination with the cleanout opening located at the lowest point within the filter, causes the heavier particles of dirt to collect at said opening. It is therefore apparent that if the plug 8 be temporarily removed while water is flowing through the downspout 14, the water will flow freely from the cleanout opening 7, carrying all of the mud or sludge with it. By removably mounting the ring 11 as shown and by detachably engaging the screen 17 with the web 9, it is apparent that both of the screens may be removed for cleansing without removing the charcoal or other filtering me-

dium from the body of the filter. If it is desired to change the charcoal, the top sections may be removed to permit this to be done. With the top sections and the screen
 5 17 removed, it is possible to turn the filter upside down to dump the charcoal therefrom. Furthermore, by lifting the plug 8 out of the opening 7, the freezing of the filter in winter is effectually prevented, for
 10 any water that passes into the filter will immediately pass therefrom.

Having described my invention, what I claim is:

1. The combination with a filter body, of
 15 a central web dividing said body into two parts, said web terminating short of the bottom of the filter body, filtering material in said body upon both sides of said web, a removable screen supported in the filter body
 20 upon the discharge side of said web, a removable screen supported in the upper end of the filter body and overlying the filtering material upon the inlet side of said web, a deflector plate overlying the screen upon the
 25 discharge side of the filter, and an inlet pipe discharging upon said deflector plate, said deflector plate in turn directing the water upon the screen that is located upon the inlet side of the filter.

30 2. In a device of the character described, the combination with a filter body having a central web located therein, which divides said filter into two parts but terminates short of the bottom of the body, filtering material
 35 upon both sides of said web, a removable ring inserted in the upper end of said filter, an inclined deflector plate carried by said ring, a screen also carried by said ring, a removable cap mounted upon the upper

end of said ring through which water is dis- 40
 charged upon said deflector plate and in turn directed by said deflector plate upon said screen, said screen overlying the filtering material upon one side of the web, a
 45 removable screen overlying the filtering material upon the opposite side of the web, and an outlet pipe leading through the wall of the filter above the last named screen.

3. In a device of the character described, the combination with a filter body having a 50
 central web located therein which divides said filter into two parts but terminates short of the bottom of the body, filtering material upon both sides of said web, a removable
 55 ring inserted in the upper end of said filter, an inclined deflector plate carried by said ring, a screen also carried by said ring, a removable cap mounted upon the upper end of said ring through which water is dis- 60
 charged upon said deflector plate and in turn directed by said deflector plate upon said screen, said screen overlying the filtering material upon one side of the web, a re-
 65 movable screen overlying the filtering material upon the opposite side of the web, an outlet pipe leading through the wall of the filter above the last named screen, perforate
 ears carried by said web, and resilient keeper arms secured to the last named screen and
 70 adapted to spring into said ears to removably secure said last named screen in position.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY POND.

Witnesses:

T. E. WILLIAMS,
 J. M. DOWNING.