J. F. RIEDY.

RAIN WATER FILTER.

APPLICATION FILED APR. 2, 1910.

968,983.

Patented Aug. 30, 1910.

Fig. 1.

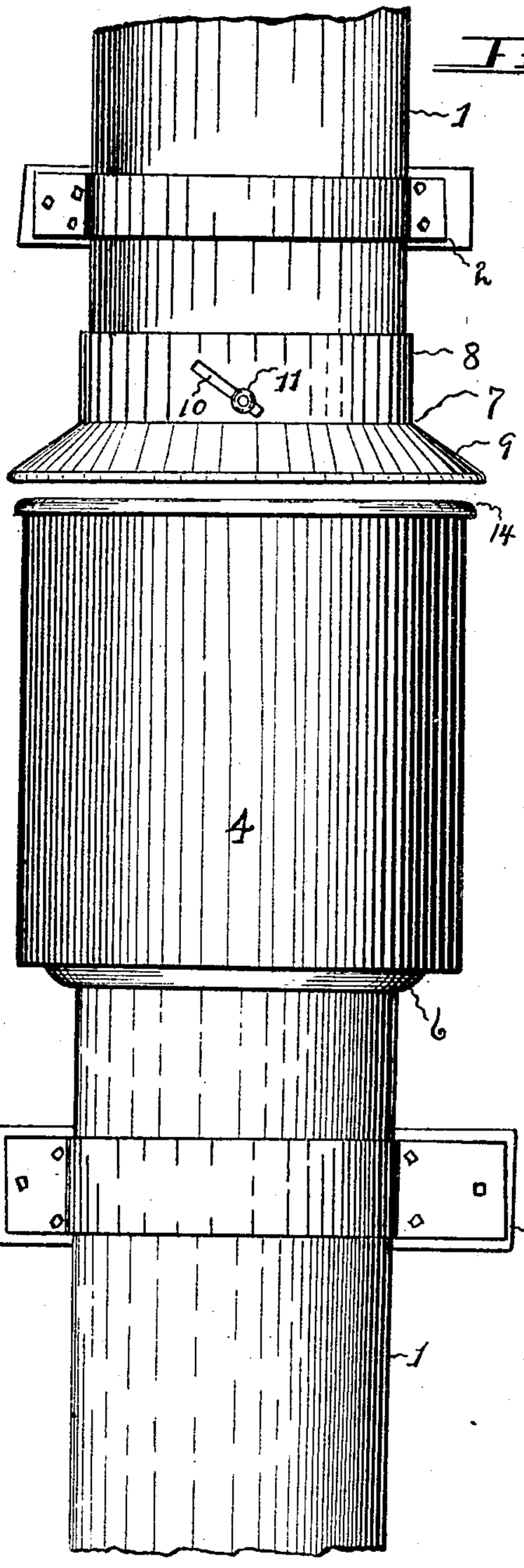
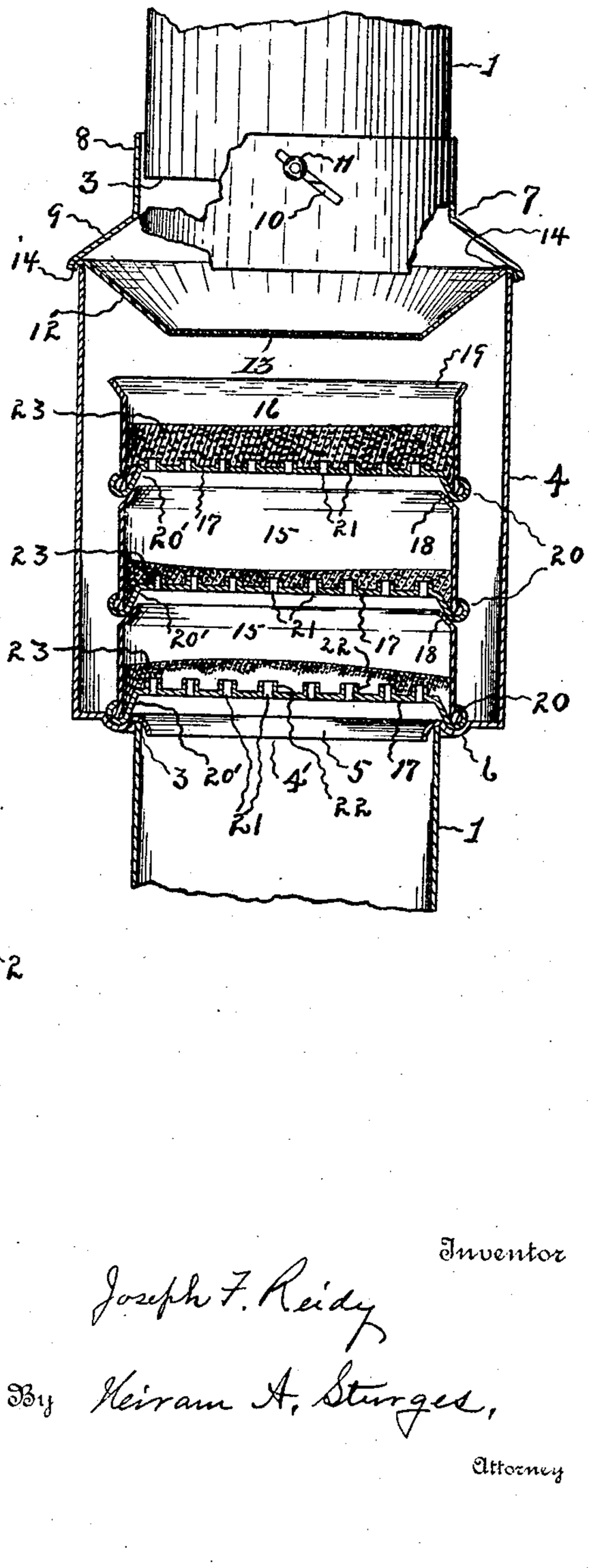


Fig. 2.



Witnesses

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JOSEPH F. RIEDY, OF HAMBURG, IOWA.

RAIN-WATER FILTER.

968,983. Specification of Letters Patent. **Patented Aug. 30, 1910.**

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To all whom it may concern:

Be it known that I, JOSEPH F. RIEDY, a citizen of the United States, residing at Hamburg, in the county of Fremont and State of Iowa, have invented certain new and useful Improvements in Rain-Water Filters, of which the following is a specification.

This invention relates to an improved rain-water filter, and has for its object to provide filters which may be conveniently attached to or removed from the conducting-pipes of buildings.

The invention has reference to certain features of construction whereby the parts of the filter may be conveniently separated for cleaning purposes, and includes the employment of a plurality of removable, perforated trays and straining devices which will be fully described hereinafter.

In the accompanying drawing forming a part of the application, Figure 1 is a vertical front view of the filter; the hood being shown in an elevated position, the conducting-pipes being broken away. Fig. 2 is a longitudinal, sectional view of a filter embodying my invention, a part of the hood being broken away.

Referring now to the drawing for a more particular description, numeral 1 indicates a vertical conducting-pipe, having the usual clips 2 for supporting the same on the side of a building, the pipe being disconnected and having adjacent terminals indicated at 3.

I employ a cylindrical casing or retainer 4 having any suitable diameter and having a length less than the distance between the adjacent terminals 3 of the conducting-pipe, its bottom being provided with an opening 4′. The bottom of the casing is formed with a downwardly-projecting, curved, annular flange 5 which defines the extent of opening 4′ and provides for the support of the casing upon the conducting-pipe; and outwardly of flange 5 said bottom is provided with an annular groove 6.

At 7 is indicated a sliding-cap or hood having a cylindrical wall 8 of a suitable diameter so that it may circumscribe the conducting-pipe and may be moved thereon, said wall 8 being provided with an annular flange 9 projecting downwardly and outwardly to overhang the casing. The hood is provided with a slot 10 formed inclinedly in its cylindrical wall and the conducting pipe near its upper terminal 3 is provided with a keeper or stud 11, engaging within slot 10, and by partly rotating the hood it may be raised or lowered while thus mounted upon the conducting pipe.

At 12 is indicated a pan or strainer having a downwardly tapered containing wall, the sieve thereof being indicated at 13. The pan is provided with an outwardly projecting terminal flange 14 adapted to have a seating upon the upper terminal of the casing.

As thus described it will be seen that when the hood is elevated the casing may be removed from its normal position between the terminals of the conducting-pipe; also at this time the strainer may be readily removed from the casing, and when the parts are assembled flange 9 may have a seating upon flange 14 of the strainer and, when thus disposed, dust or other objectionable substances may be excluded from the casing.

I provide a plurality of trays or containers 15 and 16 each having a perforated bottom 17; trays 15 are preferably formed with an inwardly flaring upper terminal 18, tray 16 having an outwardly flaring upper terminal 19. These trays, near their bottoms, are provided with annular ridges 20 extending below and outwardly of their sides, and, as integral parts of ridges 20, are provided upwardly and inwardly projecting walls 20′, these walls also being integral with bottoms 17, whereby the bottoms are depressed or project inwardly of the trays and are elevated somewhat above the ridges.

The trays are adapted to have seatings within the casing, one resting upon the other, the annular ridge 20 of the lower tray being seated within groove 6 of the casing, ridges 20 of each upper tray being seated upon the inwardly flaring terminal of a lower tray.

Perforations 21 of bottoms 17 of the trays are formed, preferably, by employing upwardly projecting walls 22. At 23 is indicated any convenient filtering substance, as charcoal, and in practice the trays are filled, or partly filled, therewith.

The device thus described provides a convenient article which may be manufactured at slight comparative expense. After water passes through the strainer the impurities not detained thereby may be collected by the filtering substance, and walls 22 will

tend to prevent the sediment which may be deposited upon bottoms 17 from passing through perforations 21.

By the construction as described, it will be seen that the trays will be adequately supported and, after they have been placed within the casing, they will not become dislodged or readily separated since ridges 20 rest upon the flaring terminals 18; also it will be noted that the trays and strainer may be conveniently removed from the casing whenever desired, for the purpose of cleaning the filtering substance and for removing the deposits.

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

1. In combination with adjacent sections of a cylindrical conducting-pipe, said sections being disposed upright and in alinement; a hood supported by the upper section of said conducting-pipe and provided with a downwardly divergent annular wall, a cylindrical casing having an apertured bottom with a curved terminal flange and an annular groove; a perforated tray having filtering material therein, and provided with an annular ridge; said tray adapted to have a seating within and transversely of the casing, its annular ridge registering with the annular groove of said casing; said casing adapted to have a seating upon and with its annular groove registering with the lower section of said conducting-type, means for removing said hood longitudinally of the conducting-pipe to dispose its downwardly-divergent wall outwardly of said casing.

2. A filter consisting of an upright apertured, supporting-receptacle, a plurality of cylindrical trays adapted to contain filtering material and formed with depressed, perforated bottoms and inwardly flaring upper terminals; said trays adapted to have seatings within the receptacle, the inwardly flaring upper terminals of a tray being disposed in the plane of the depressed bottom of another tray and providing an upright passageway through the trays communicating with the aperture of said supporting-receptacle.

3. In combination with an upright supporting-receptacle having an open top and an apertured bottom, a plurality of cylindrical trays adapted to contain filtering material, and formed with depressed, perforated bottoms and with inwardly-flaring upper terminals; the bottoms of said trays being provided with upset containing walls surrounding the perforations; a sieve member disposed within and supported by the receptacle adjacent to its open top; said trays adapted to have seatings within the receptacle, the inwardly flaring upper terminals of a tray being disposed in the plane of the depressed bottom of another tray and providing an upright passage-way through the sieve-member and trays and communicating with the aperture in the bottom of said receptacle.

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

JOSEPH F. RIEDY.

Witnesses:
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