

No. 864,884.

PATENTED SEPT. 3, 1907.

J. CAPALDI.  
VENT CAP.

APPLICATION FILED JULY 20, 1906.

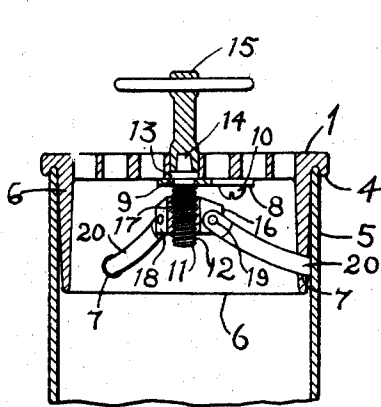


Fig. 2

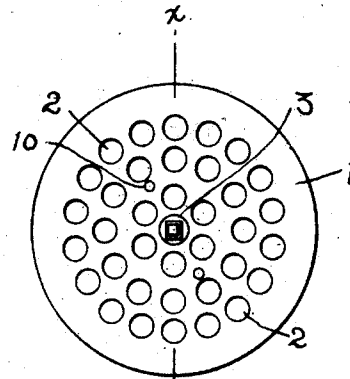


Fig. 1

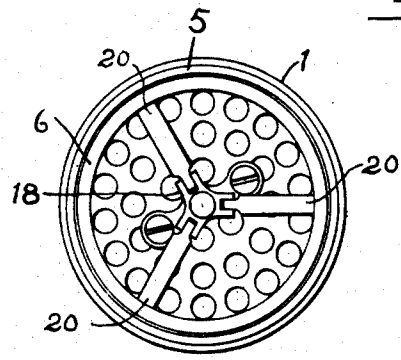


Fig. 3

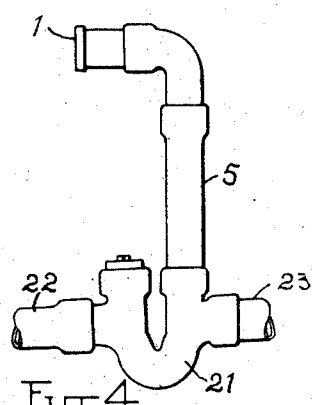


Fig. 4

WITNESSES

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# UNITED STATES PATENT OFFICE.

JOSEPH CAPALDI, OF PROVIDENCE, RHODE ISLAND.

## VENT-CAP.

No. 864,884.

Specification of Letters Patent.

Patented Sept. 3, 1907.

Application filed July 20, 1906. Serial No. 326,989.

To all whom it may concern:

Be it known that I, JOSEPH CAPALDI, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Vent-Caps, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to vent caps for sewer pipes, and has for its object a structure which cannot be willfully or accidentally displaced from the pipe; thereby protecting the sewer trap from dirty and clogging accumulations.

A further object is to attain this end by a cheap, easily operated, and strong structure.

To the above ends my invention consists essentially of the novel construction and combination of parts hereinafter described, and illustrated in the accompanying drawings, wherein

Figure 1 is a plan view of my novel cap. Fig. 2, a section of the same on line  $xx$  of Fig. 1. Fig. 3, a rear view of the same, and Fig. 4, a side elevation, a sewer trap and adjacent piping showing my vent cap applied thereto.

In the drawings, like reference characters indicate like parts throughout the views.

1 is a cap plate provided with a series of vent holes, 2, concentrically disposed in relation to a central opening, 3, therein, and an external annular grooved shoulder, 4, upon its inner margin, adapted to receive the end of the stem pipe, 5. The plate has also an integral inwardly directed flange or side, 6, provided with three openings, 7. A plate, 8, provided with an opening, 9, registering with the opening, 3, is fixed by a screw, 10, to the inner face of the plate, 1. A rod, 11, provided with threads, 12, is rotatably mounted in the openings, 3, and 9 of the plates, 1 and 8 respectively, and is provided with an annular shoulder, 13, resting against the plate, 8. Its upper end, 14, is squared to fit the socket of a key, 15. A spider, 16, is provided with threads, 17, to receive the threads, 12, of the threaded operating rod, 11. Pivoted to the arms, 18, of the spider by pins, 19, are three inwardly inclined radial arms, 20, whose ends pass into or through the openings, 7, of the flange, 6.

In Fig. 4, my cap, 1, is shown mounted in the stem pipe, 5, rising from the sewer trap, 21, from which lead the usual soil pipe, 22, and waste pipe, 23.

The cap is thus operated: In applying the same, to the cap, flange 6 is inserted into the pipe, 5, wherein it is a loose fit, and the groove of the shoulder, 4, of the plate receives the end of the pipe, 5. To fix the cap in place, the removable key, 15, is applied to the rod end, 14, and turned in one direction, thereby forcing the spider, 16, downwardly, and forcing the ends of the arms, 20, into frictional contact with the inner surface of the pipe.

What I claim is

1. As a new article of manufacture, a vent cap for sewer pipes, the same comprising a perforated face plate having a flange to enter a pipe and having a plurality of openings, a threaded rod rotatably mounted in said plate, a spider threaded upon said rod, and arms pivoted to said spider with their free ends passed through the openings in the flange.

2. As a new article of manufacture, a vent cap for sewer pipes, the same comprising a perforated face plate having a flange to enter a pipe and having a plurality of openings, a threaded rod rotatably mounted in said plate, a spider threaded upon said rod, and arms pivoted to said spider with their free ends passed through the openings in the flange, said face plate having an external annular grooved shoulder to receive the end of the pipe.

3. The combination with a stem pipe, of a perforated face plate having exterior grooved annular shoulder receiving the end of said pipe, and a flange extending loosely within the pipe and having openings, a plate secured to the inner face of said face plate and having an opening registering with a central opening in the face plate, a threaded rod passed loosely through said registering openings and having its outer end shaped to receive a key, a spider threaded upon said rod and radial arms each independently pivoted to the spider with their free ends passed loosely through the openings in said flange and engaging the inner wall of the stem pipe.

4. The herein described improved vent cap for sewer pipes comprising a perforated face plate having a right angled flange with openings therethrough, a plate secured to the under side of said face plate, a threaded rod rotatably mounted in coincident openings in said plates, a spider having threaded opening to engage the threads of said rod, radially disposed arms pivotally mounted on said spider and passed through the openings in said flange to engage at their ends against a pipe, and means insertible through the face plate to engage said rod for turning it.

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

JOSEPH CAPALDI.

Witnesses:

HORATIO E. BELLOWES,  
HAROLD E. BALL.