

(No Model.)

C. F. PALMER.
SEWER WELL, GRATE, &c.

No. 540,841.

Patented June 11, 1895.

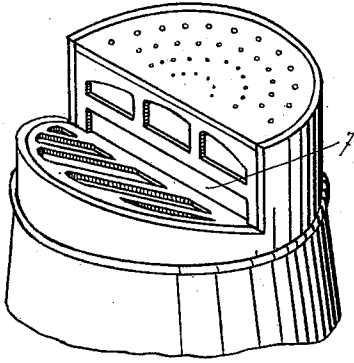


Fig. 2.

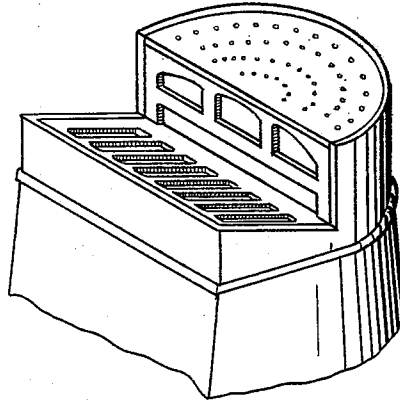


Fig. 3.

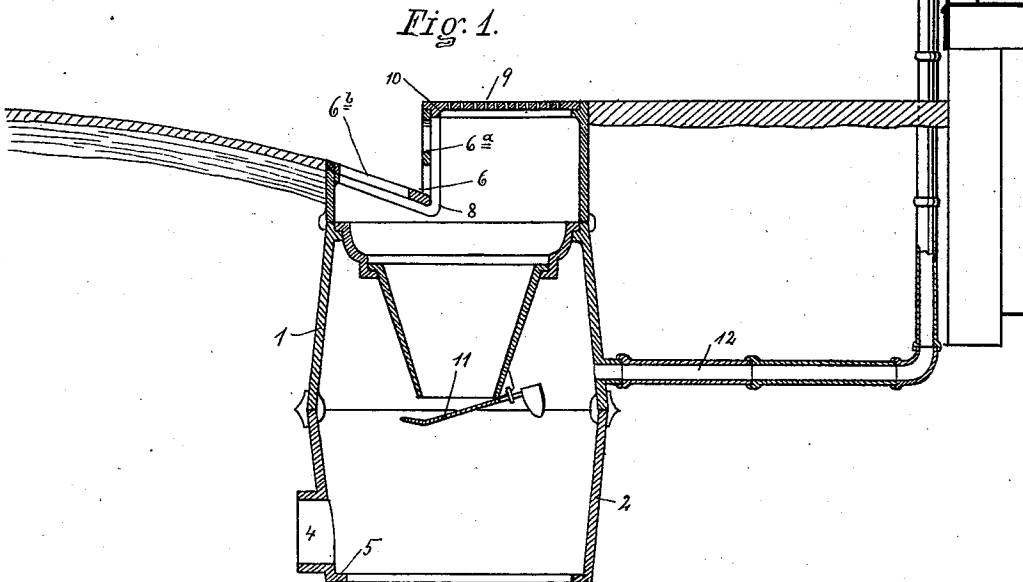


Fig. 4.

WITNESSES.
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SEWER WELL, GRATE, &c.

SPECIFICATION forming part of Letters Patent No. 540,841, dated June 11, 1895.

Application filed March 8, 1893. Serial No. 465,148. (No model.)

To all whom it may concern:

Be it known that I, CYRUS F. PALMER, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Sewer Wells, Grates, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to improvements in sewer wells and grates and devices pertaining thereto.

In the drawings which accompany and form a part of this specification, and in which similar figures of reference refer to corresponding parts in the several views, Figure 1 shows a vertical section of a sewer-well, including a ventilator-tube, which may also serve the purpose of conductor-pipe from the roof of a building. Fig. 2 shows a perspective view of the upper portion of a sewer-well, showing more particularly the grate and cover. Fig. 3 shows a view similar to Fig. 2 of a modified form of construction having a square front.

Referring more particularly to the reference numerals marked on the drawings in a more specific description of the device, 1 and 2 indicate the top and bottom sections respectively of the sewer well. A number of intermediate sections may be provided if desired. The sections are made conical with the smaller part of the cone upward in the upper sections and the smaller part of the cone downward in the lower sections. The sections are made of a single piece of metal and the body of the sections are made circular. The edges of the sections are made to register with each other by lugs as 3 projecting from one section within the other. The sections are relatively rotatable to place the grate mounted in one of the sections, in any desired position, while the discharge opening 4 into the sewer may be brought into a convenient position to connect with the sewer. The lower section is mostly open at its lower end but is provided with an inwardly extending flange 5 which becomes a base for the well.

In the upper end of the well is provided a grate 6 in an opening cut from the corner of the well, substantially as shown. The grate is provided with a vertical portion 6^a and an inclined portion 6^b inclining from the outer edge of the grate side of the well downwardly as it extends inward toward the axial line. In the lower edge of the vertical portion of the grate is provided an opening 7 which extends almost entirely across the face of the grate except connecting ears at either end between the two portions of the grate. The lower edge of the opening 7 is in line with the face of the inclined portion 6^b of the grate.

The grate is supported on flange 8 on the interior of the well and is retained in position by the overlapping edge of the cover 9, which cover is provided with a flange 10 extending across the straight side of the cover to retain and support the grate.

The inclined portion 6^b of the grate is preferably substantially on the same angle with the curvature of the pavement of a street, but in all cases must incline downward from the outer edge of the sewer well toward the central line. In the sewer well I provide an automatic trap 11; and I propose to connect with the well below the trap, a tube 12 which will extend up the side of a building, as shown, to the eaves and which will answer the purpose of a ventilator tube for the sewer and a waste pipe from the eaves. This pipe, will always be free from ice in cold climates as the warmer air from the sewer escaping from the pipe will prevent freezing. The pipe relieves the sewer from pressure and prevents the sewer gas from forcing the traps of the sewer connections.

My sewer well is placed in position in a street so that the vertical face of the grate will conform substantially with the curb line of the street; and the inclined face 6^b will conform to the gutter line of the street.

It may be noted here that streets paved with smooth materials, as asphalt, there is no part which is particularly and distinctively a gutter, and it is in connection with these streets that my well is more particularly intended for use.

The operation of the device is too obvious to warrant description. It may be noted, however, that the grate face 6^b being on an

incline and provided with an opening 7 at the lower edge of the inclined face that the grate will always be washed free by surface water running into the sewer and the openings in the inclined face 6^b will never become obstructed by matter running on to the grate and then holding it down in an attempt to pass through the openings as is common with horizontal grates or grates in which the grate bars extend continuously on the horizontal and vertical faces of the grate.

The modified form of construction in Fig. 3 is more particularly intended for use in streets that are paved with stone or similar materials; in which case the square or angular form is better to build to.

What I claim as new, and desire to secure by Letters Patent, is—

A sewer well having an angular recess in its upper edge to receive the grate, a single piece angular sewer grate 6 having an in-

clined gutter portion 6^b inclining from the outer or grade side of the well downwardly toward the curb line and center of the well, and a vertical curb line grate portion 6^a having a clear opening 7 at the acute angle between the portions of the grate, an inwardly projecting supporting flange 8 on the well conforming to shape of the grate and the recess in the edge of the well, and a cover 9 closing the top of the well except the grate opening and resting upon the upper edge of the vertical portion of the grate, whereby the whole grate is retained in position, all combined, substantially as set forth.

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

CYRUS F. PALMER.

Witnesses:

GEORGE C. CARTER,
G. A. GAYMONDS.