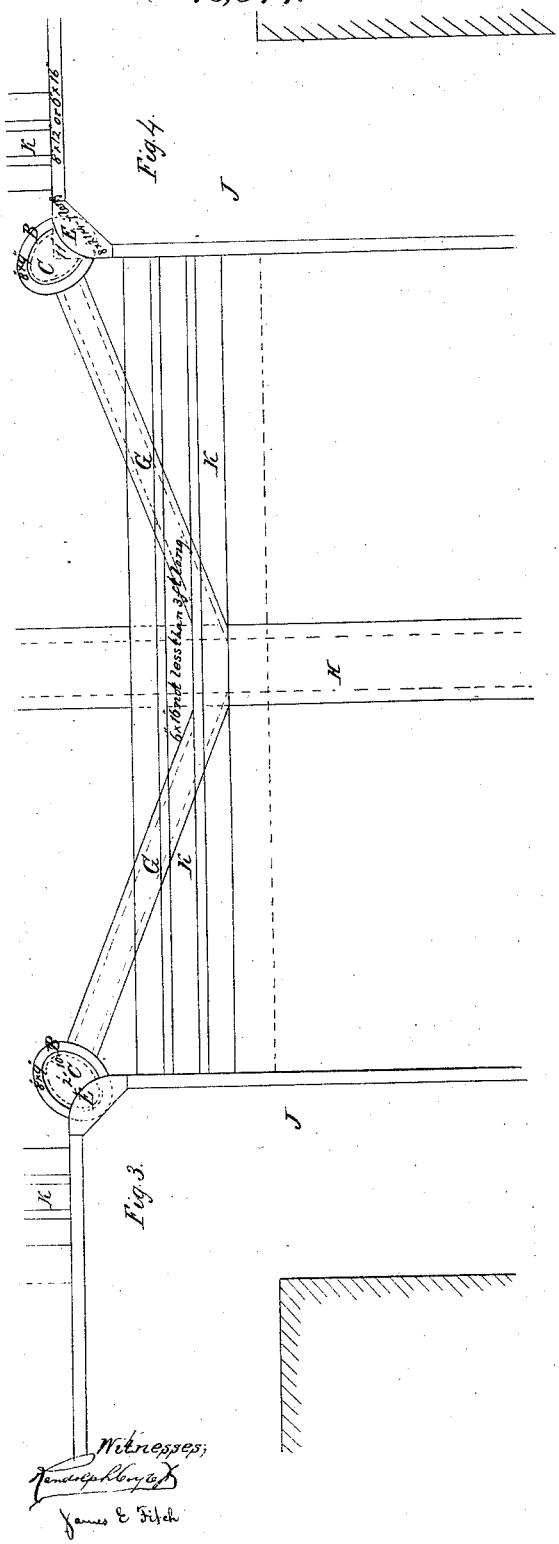
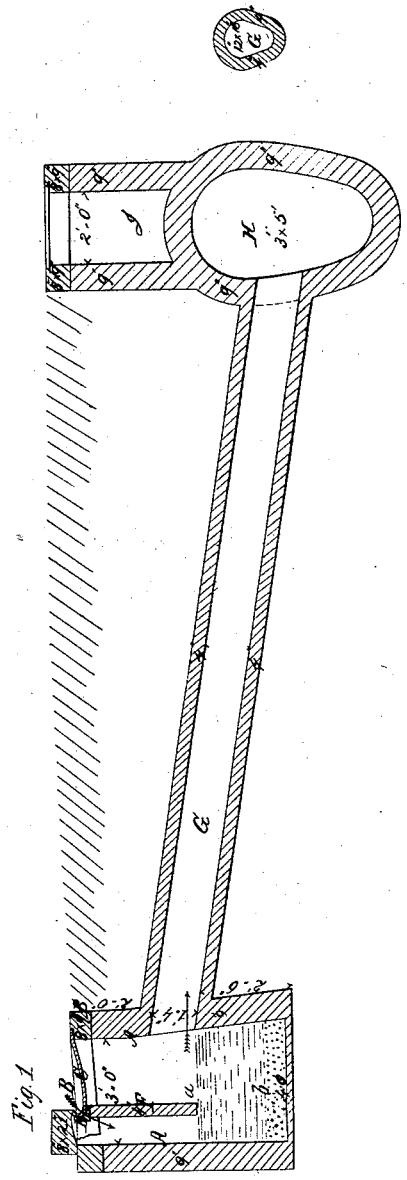
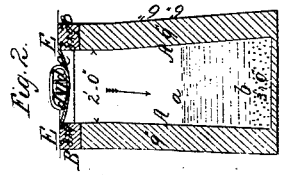
C. T. Bohen.

Sewer.

No. 45,577. Patented Dec. 27, 1864.







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UNITED STATES PATENT OFFICE.

GEORGE T. BOHEN, OF SAN FRANCISCO, CALIFORNIA.

IMPROVED CESSPOOL.

Specification forming part of Letters Patent No. **45,577**, dated December 27, 1864.

To all whom it may concern:

Be it known that I, GEORGE T. BOHEN, of the city and county of San Francisco, in the State of California, have invented a new and useful Improvement in Cesspools for Street-Sewers; and I do hereby declare that the following is a full, clear, and exact description of the construction of the same, reference being had to the accompanying drawings, making a part of this specification, of which—

Figure 1 is a vertical section of my improved cesspool, including longitudinal section of small sewer, as constructed from the large or main sewer to the cesspool, and transverse section of the large sewer, including the man-trap above; Fig. 2, a transverse vertical section showing the front of the curb, under which the water from the gutter passes; Figs. 3 and 4, plan view showing the exact positions of the cesspools at the corners of the squares and the direction of the small sewers leading from same to the large one in the street in full and dotted lines, also giving a view of the pavements and street crossings; Fig. 5, a cross-section of small section.

Like letters indicate corresponding parts in all figures of the drawings.

The nature of my improvement consists in the construction of an oval-shaped cesspool, one of which shall be located on every corner where the same will admit, and immediately under the gutter, so as to obviate the necessity of tearing up the pavement and curb for the excavation of the earth in the construction of the cesspool, in which case the dirt, brick, and other material accumulates on the side-walk, rendering it unsafe at times, and particularly at night, to pedestrians passing and repassing, who are liable to stumble over the obstructions thus made, or, by some mishap, fall into the excavation, through the carelessness of the workmen in not securing the top in a proper manner. I propose to avoid all this by locating the cesspool under the gutter, where the material and rubbish will be entirely out of the way, and where it will require less trouble and expense in removing the gutter-stone than in taking up the pavement, in which case the bricks to a more or less extent break and are rendered unfit to be relaid again.

I do not confine the location of the cesspool to the corner exactly, where the grades of the gutters on the square do not converge at that point; but I do not confine the location thereof at such place on the square and under the gutter where the grades of the same will admit of a free conveyance of the water; nor do I design that there shall be one on every corner of the square, except only where the system of sewerage is perfect, and then the location thereof should be governed by the grades of the gutters or street. It is desirable, however, to locate them at such points as shall conduce to the proper cleanliness and drainage of the gutters.

The chief advantages of my improved cesspool is in the arrangement of a simple partition-wall, and in the construction of angular or outwardly-inclined walls, and in the peculiar location of same in its relation to reception of water from the gutters, the object being, first, by the partition-wall to prevent the smell or stench from the sewer and from the standing water in the cesspool escaping into the open air; second, by the outwardly-inclined walls the sediment that has accumulated from time to time from the gutter is prevented, to a great extent from arising to the surface of the standing water in the cesspool, (occasioned by the agitation of water coming in from the gutter,) and from escaping therefrom into the main sewer, which, in course of time, from the accumulation of sediment therein, is filled, thus rendering it necessary to have it cleaned oftener than would be required were the sediment kept or retained in the cesspools, thus making it more expensive and inconvenient to clean the sewer than to clean the cesspools. Of course, the sediment or other matter will more or less find its way into the large sewer and gradually fill up the same; but the object of my improvement is to prevent this as much as possible; third, in the peculiar location of the cesspool immediately under the gutter, one end of the wall being just enough beyond and under the curb to receive the flow of water from the gutter, so that, instead of the entire body of it (in case of a storm) being precipitated onto the standing water below, it is thrown against the wall by the oblique direction it takes after leaving the gutter, the wall being close enough to receive it, the object of which is to prevent the standing water from being agitated and the sediment at the bottom from being dis-

turbed, which, thereby arising to the surface, not only escapes into the large sewer, as above stated, but by the stirring up thereof emits a most intolerable smell, which, however great, may be the means provided against it, will more or less find its way into the street, much to the discomfort of the passer-by. It is not the escape of the stench so much, if at all, from the large sewer which is prevented by the partition-wall, for it is the disturbing of the sediment or refuse matter at the bottom of the cesspool washed in from the gutter which produces the smell or stench. The limited space allowed for the reception of the water from the gutter between the partition-wall and the end wall of cesspool under the curb is such that whatever water from a violent rush thereof from above may touch the surface of the standing water in this space, (which will be the case to a more or less extent,) or from a moderate dripping or flow thereof, is not sufficient to affect or agitate that part or the great body of water back or beyond the partition-wall and next to the mouth or opening of the small sewer. By this simple arrangement in the construction of the cesspool the sediment or other matter is retained in the same so that it may be cleaned when found necessary, and at the same time smell or stench is prevented from issuing therefrom.

The parts herein referred to will be more particularly pointed out and specified by letters designating them.

To enable any one skilled in the art to make and construct this cesspool, I proceed to describe its construction.

I build the walls A of brick of an oval form, preferring this shape as being better adapted to the corners and the gutters leading thereto, and as presenting a better view to the street, as far as taste is concerned. The dimensions are given in full on the drawings. The wall or walls are angularly or outwardly inclined entirely around for the purpose as above stated and cemented on the inside in a proper manner. On the top there is a stone capping, B, flush or thereabout with the surface of the gutter and the street adjacent thereto. C is the cast-iron lid or cover, which rests and fits on the inner edge of the stone capping, flush with its top surface, and may be removed when found necessary for cleaning out the cesspool. D is a cast-iron oval plate with two inlets, *d d*, (or more if necessary for the passage of the water therein,) set in under the curb E and resting on the partition-wall F, immediately underneath, which latter may be either curved or straight. This wall extends from under this plate nearly to the bottom, with a sufficient curve or opening at the under side in the middle to allow the water to pass under from the gutter into the sewer. The red arrows indicate the direction of the water from the gutter into the cesspool, and from thence into the sewer. *a* is the standing water; *b*, the sediment or other matter. G is the longitudinal small sewer. H is the large one, with man-trap I above; J, the pavements; K, the street-crossings.

Having thus fully described my improvement, what I claim therein as new, and desire to secure by Letters Patent, is—

The angular or outwardly-inclined walls, in combination with the curved or straight partition-wall and cast iron oval plate above, substantially in the manner and for the purpose herein described.

GEO. T. BOHEN.

Witnesses:

J. T. CLARKE,

DAVID A. BURR.