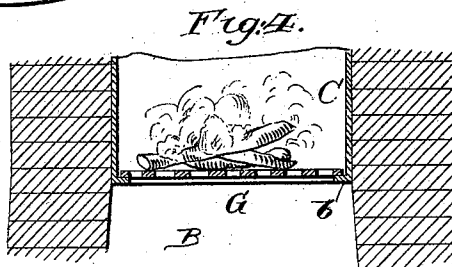
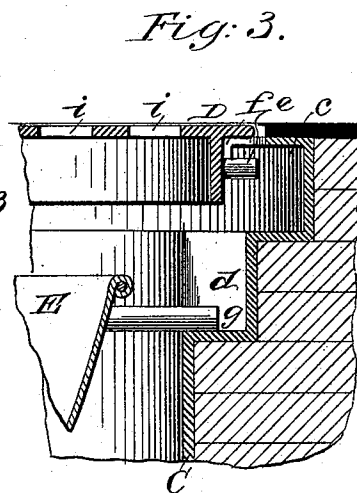
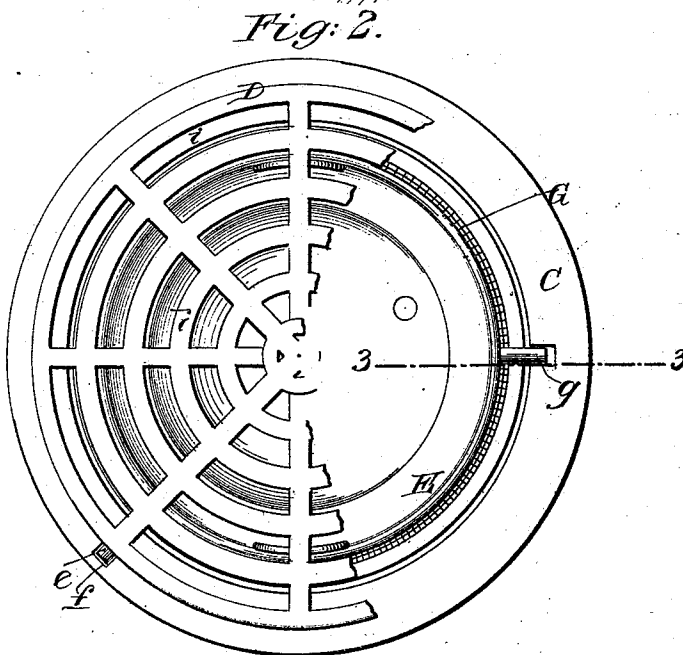
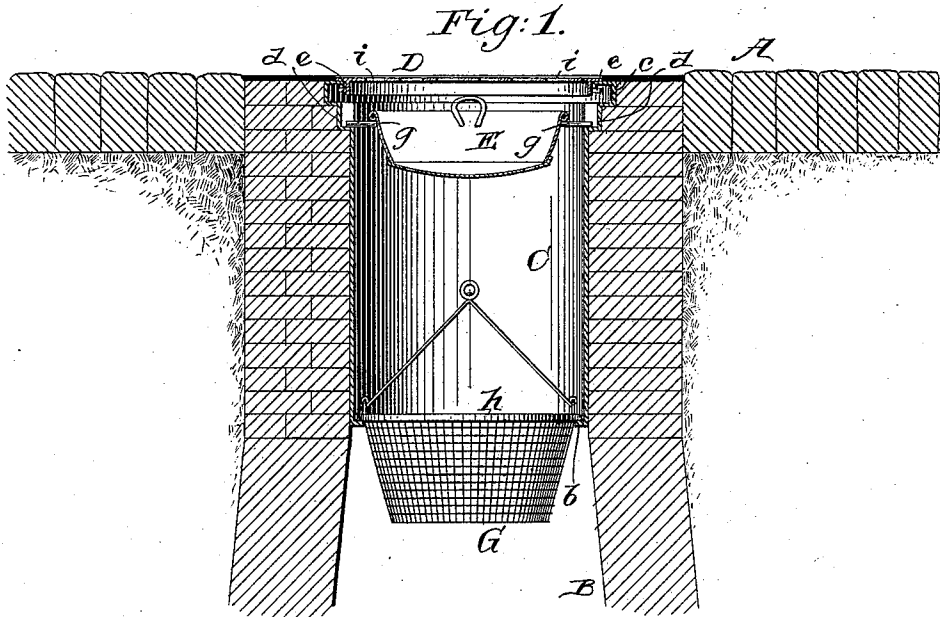


(No Model.)

G. WRIGHT.
MANHOLE FOR SEWERS.

No. 530,816.

Patented Dec. 11, 1894.



WITNESSES:
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GEORGE WRIGHT, OF WINNIPEG, CANADA.

MANHOLE FOR SEWERS.

SPECIFICATION forming part of Letters Patent No. 530,816, dated December 11, 1894.

Application filed May 11, 1894. Serial No. 510,888. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WRIGHT, of Winnipeg, Province of Manitoba, Canada, have invented a new and useful Improvement in Manholes for Sewers, of which the following is a full, clear, and exact description.

This invention has for its object the ventilation of the manholes of sewers in cities, towns or other places and the purification of the obnoxious or deleterious gases emanating therefrom.

The invention will be first described and then specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a vertical section of a street pavement and sewer manhole in part, with the invention applied. Fig. 2 is a top view of the manhole case and its ventilating lid or cover, in part. Fig. 3 is a vertical section, in part, upon the line 3—3 in Fig. 2, showing the ventilating lid and mud-pan, with means for holding and securing these devices in place; and Fig. 4 is a vertical section, in part, showing a grate with charcoal fuel on it, resting on a lower inside rim of the manhole case, instead of the deodorizing basket represented in Fig. 1.

Referring in the first instance to Figs. 1, 2, and 3 of the drawings, A indicates a street pavement and B a sewer manhole therein. This manhole is fitted internally of its brick-work with a case or cylinder C of cast iron of a suitable depth. Said case, which occupies the upper part of the manhole, is made with an internal rim *b* at its lower end, and at its upper end, with step-like offsets *c d* one above the other, the larger and upper one *c*, of which receives down within and over it, a perforated ventilating manhole cover D provided with side pins or lugs *e* that when fitting the cover to its place pass down through radial openings *f* in the upper part of the larger offset *c* to provide, by slightly turning the cover, for locking or holding the cover in place against tilting up by heavy vehicles or bodies passing over it. The lower offset *d* of the case C serves to support, by side pins or lugs *g*, a mud pan E to catch earth or mud passing

through the ventilating cover and prevent it from falling into a deodorizing basket G below and which rests by an outer hoop *h* on the internal rim *b* at the bottom of the case C. The ventilating cover D has any number of ventilating openings *i* up through it, of any desired shape.

The basket G and mud pan E may readily be slipped into or removed from their places in the case C when required, by opening or removing the ventilating lid or cover D. Said deodorizing basket G is preferably made of galvanized wire and is charged or re-charged as often as required, with any suitable deodorizing material, preferably broken or pulverized charcoal, and by the close fit of the basket on the lower inner rim *b* of the case, noxious or deleterious gases rising from the sewer are prevented from passing it except through the deodorizing material in the basket, whereby the gases passing upward are consumed or purified, and the mud pan E prevents any fouling of the deodorizing material in the basket. Where charcoal is used in the basket, I prefer to use charcoal made from ash wood, oak or the roots of trees, burned hard and kept dry till used. When charcoal is not convenient to be had, then lime, though inferior, might be used in the basket, or tar or various chemicals as desired. To make a close fit of the basket within the case C it might be screwed into the latter if preferred. The purification, absorption or consumption of the various gases rising from the sewer will be effected by these means, which will virtually exclude bad odors rising to and through the ventilating cover C.

When disease is raging in a town or place, the basket G may be taken out of the case C and a fuel receptacle or iron grate G, as shown in Fig. 4, be inserted in its place. Upon this grate ordinary charcoal to be burned may be laid and a light applied thereto, when little or no smoke will pass out through the ventilating lid D but the burning charcoal and its fumes will consume or purify any rising sewer gases. A gas pipe connecting several manholes and providing a gas jet or flame to each manhole may be used for this purpose. Asbestos or fire-clay vessels instead of the grate may be used in the same way. These

means will be found useful, applied to the drains of hospitals where there are contagious diseases.

Having thus fully described my invention,
5 I claim as new and desire to secure by Letters Patent—

1. The combination with the open ended metal casing or lining for manholes formed near its upper end with an offset *d*, and a second
10 off set *c* thereabove, the upper horizontal wall or flange of which is provided with slots *f* in its inner edge, of the open work cover resting on said flange and having radial pins
15 *e* passed down through slots *f* and engaging the under side of said flange, and the mud pan *E* of less diameter than the casing and having radial pins *g* resting on the shoulder formed by the off set *d*, substantially as described.

2. A manhole casing comprising the open 20 ended metal case *C* having an inwardly projecting rib *b* around its lower edge, an off set *d* just below its upper end, a second larger off set *c* thereabove and having its upper flange provided with slots *f* in its inner edge, 25 a purifier *G* resting on the rib *b*, a mud pan of less diameter than the case and having radial pins *g* resting on the shoulder formed by the off set *d* and the cover resting on the top flange of the case and provided with radial 30 pins *e* passed through slots *f* and engaging the lower side of said top flange, substantially as described.

GEORGE WRIGHT.

Witnesses:
S. B. RITCHIE,
JOHN DUFFIE.