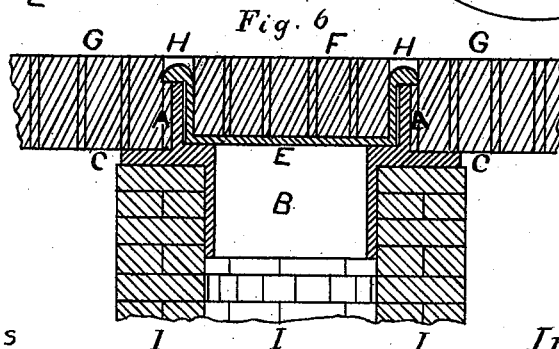
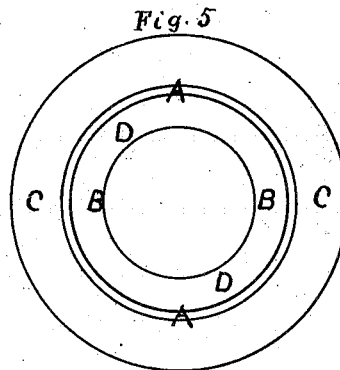
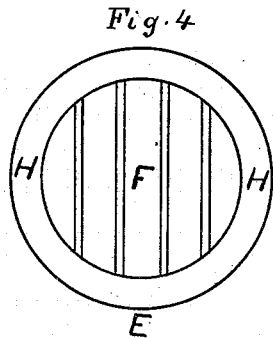
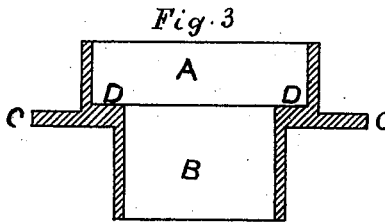
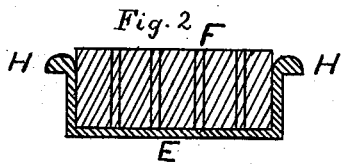
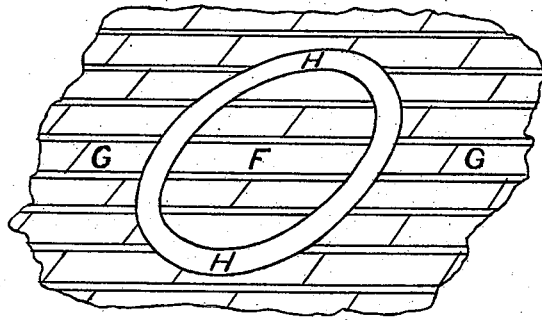


T. KERR.
Manhole and Cover.

No. 201,349.

Patented March 19, 1878.

Fig. 1



Witnesses
Chas. W. Lakin }
Geo. W. Lakin. }

Inventor
Thomas Kerr

UNITED STATES PATENT OFFICE.

THOMAS KERR, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN MAN-HOLES AND COVERS.

Specification forming part of Letters Patent No. 201,349, dated March 19, 1878; application filed July 20, 1877.

To all whom it may concern:

Be it known that I, THOMAS KERR, of the city and county of Milwaukee, State of Wisconsin, have invented a new and Improved Man-Hole and Cover; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of the man-hole in place in the street-pavement. Fig. 2 is a vertical section of the pan or thimble filled with pavement. Fig. 4 is a plan of the same. Fig. 3 is a vertical section of the complex tube. Fig. 5 is a plan of the same. Fig. 6 is a vertical section of the man-hole cover and chimney of the sewer when connected.

Like letters of reference indicate like parts in each.

This invention is designed for and adapted to sewers, or to any subterraneous or other opening or excavation. Its object and design are to form a ready, safe, and convenient cover and man-hole or chimney for sewers or any under-ground or other place. It is made principally of iron, steel, brass, or other metal, or of vulcanized material, combined with wood, rubber, cement, or other composition, presented to the surface, and suitable to be traveled on and over without danger of injury either to the man-hole cover or to the traveler over it. Its form may be circular, square, parallelogrammic, pentagonal, or polygonal. It consists of a complex tube or pipe, Figs. 3 and 5, composed of what are denominated the "upper section" A and "lower section" B, as shown in the accompanying drawing, which sections are united and molded in one piece, with flange C surrounding it at a proper distance—say, six or ten inches from the top of the upper section—and of proper thickness or width—say, three-eighths of an inch to one inch—and produced or extended from said tube or pipe at the division point or line between the said upper and lower sections thereof, so as to form a continuous shoulder or narrow platform around said tube or pipe at the junction of said upper and lower sections, and at the division point or line between them, said shoulder or platform being at right angles

with said complex tube or pipe. The upper section of said complex tube or pipe is, say, from one to three inches greater in diameter than the lower section, so that at the junction of said sections there is an interior shoulder or platform, D, projecting from the interior surface toward the center of the tube or pipe, and at right angles with such surface, say from two to three inches, on which shoulder or platform the thimble or pan-cover E of the upper section rests, and said upper section of the tube or pipe the thimble or pan-cover completely fills.

The exterior shoulder or platform is to rest on the brick or other foundation, to be built up from the sewer like a chimney, which is shown at I, and the lower section of said tube or pipe is admitted into the top of such chimney, so as to form a perfect hollow connection with the sewer.

The upper section A of said tube is designed to receive the thimble or pan-cover E, which is to rest on the interior shoulder or platform. This thimble or pan-cover covers the hole or orifice of the tube, and the top edge of the thimble is rounded, and projects a little over the outer surface of the tube or pipe, forming a rim, as shown at H; and when the whole thing is set in its proper place the top edge of said thimble is about on a level with the surface of the street or its pavement.

Such thimble or pan-cover E is filled or paved with blocks of wood, or with rubber, composition, or any substance suitable to be traveled upon, and such thimble, when so filled or paved, presents a smooth or level surface, as at F, even with the surface of the street-pavement G.

Such thimble can be detached, removed, and replaced at pleasure. The thimble may be constructed with or without holes in its bottom, with small conductor-tubes extending from such holes nearly to the even surface or level of the street-pavement.

The invention, properly constructed and applied, makes the man-hole as safe to be traveled over as is any other part of the street, and renders the sewer or other subterraneous excavation or chamber easy of ingress, egress, and regress; and as a whole it forms a com-

plete cap and cover to the sewer-chimney, so that the feet of horses, cattle, or other animals, or the wheels of wagons or other vehicles, will not come in contact with the iron or other metallic cover or surface.

A section of the top of the man-hole or sewer-chimney is also represented in the drawing.

I claim as my invention and desire to secure by Letters Patent—

The improved man-hole and cover, consisting of the thimble A B, provided with flange C and shoulder D, in combination with the hollow cover E, adapted to receive paving material, substantially as shown and described.

THOMAS KERR.

Witnesses:

GEORGE W. LAKIN,
CHASE W. LAKIN.