

(No Model.)

C. E. EMERY.
MAN HOLE VAULT COVER.

No. 304,515.

Patented Sept. 2, 1884.

Figure 1.

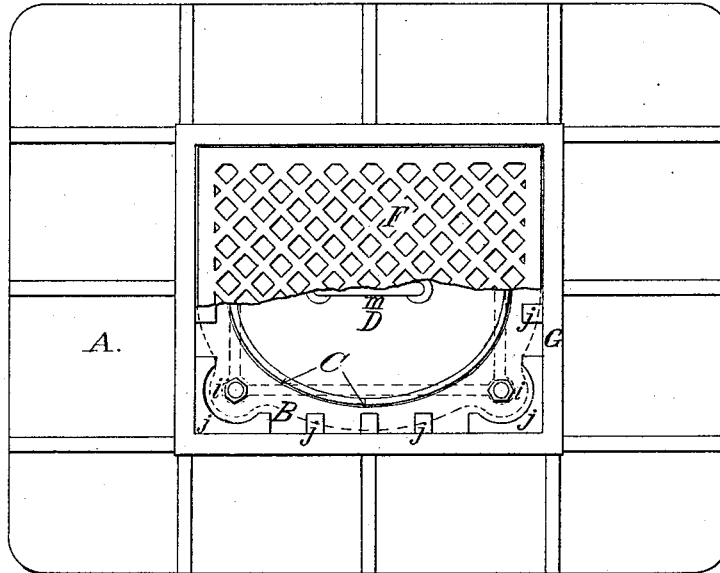


Figure 2.

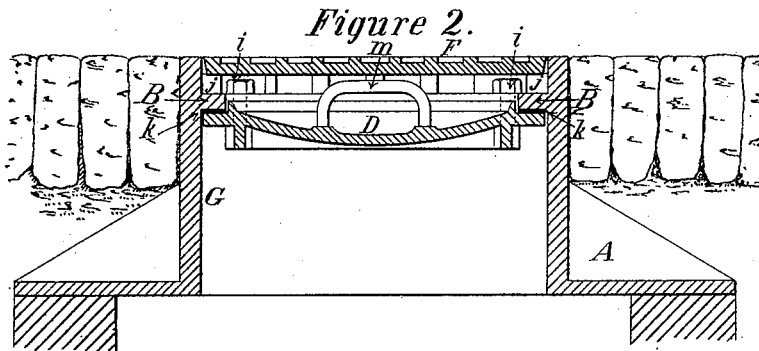
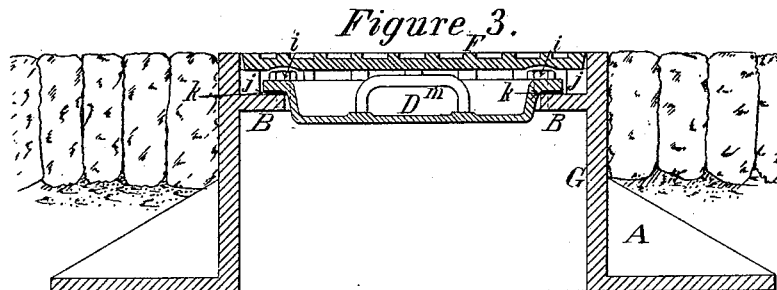


Figure 3.



Witnesses:

Wm. Rumble
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Inventor:

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UNITED STATES PATENT OFFICE.

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MAN-HOLE VAULT-COVER.

SPECIFICATION forming part of Letters Patent No. 304,515, dated September 2, 1884.

Application filed March 6, 1882. Renewed March 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. EMERY, of the city of Brooklyn, county of Kings, and State of New York, have made certain new and useful Improvements in Man-Hole Vault-Covers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification.

This invention is designed for use in the public streets over vaults that it is desirable to keep water-tight without interference with the traffic on the surface, and refers to the arrangement of a water-tight man-hole cover immediately below another cover with roughened surface to receive the traffic.

In the drawings, Figure 1 represents a plan view of the man-hole vault-cover complete, the outer cover being partially removed to show the inner cover. Fig. 2 is a central longitudinal section of the whole device in an approved form. Fig. 3 is a similar section of a modification.

The frame of the vault-cover is designated A. It is made on the exterior in any customary manner—for instance, of cast-iron—with a flange to cover the vault or a portion thereof, such flange being ribbed, as shown, to a casing, G, preferably of rectangular form, with a metal arranged nearly vertically around the man-hole opening. Paving may be placed about the upper part of the casing nearly flush with the upper surface, as shown, or in any customary manner. Within the casing G is arranged a horizontal web, B, provided with an opening, C, preferably of oval shape. This opening C is covered by a man-hole plate, D, which is held in place by bolts *i i*, arranged in the web B and plate D about the opening, but preferably in the spandrel-spaces in the corners of the casing. A gasket, *k*, or joint-packing, of rubber or other flexible or elastic material, is placed between the adjacent surfaces of plate D and web B, and sufficiently compressed by bolts *i* to make a tight joint. On the upper side of web B are provided supports *j j*, the upper surfaces of which are arranged below the top of the casing, and receive an outer man-hole cover, F, with roughened surface, substantially as shown, adapted to give proper footing, and to withstand the wear and jar of the traffic. The supports *j j* are practically part of web B,

and may be connected to form a complete ledge above the web proper around the inside of the casing. The arrangement shown is practically a ledge cut up into blocks to save metal.

The face for man-hole plate D is shown in Fig. 2 on the bottom of web B, which simply requires that the opening C be sufficiently oblong to permit the introduction of the plate from the top, as usual with boiler man-hole plates, a handle, *m*, being provided to facilitate this operation. In Fig. 3 the man-hole plate D is seated on the top of web B, the supports *j j* being separated sufficiently to leave a proper face on web B, which requires that the casing G be a little larger than in the other case. It would be possible, evidently, to place the supports *j j* on the top of the plate D in Fig. 3; but it is less desirable than arrangement shown, as the jar of the traffic would soon loosen the joint made by packing *k*. The inner cover, D, to secure tightness, is placed so near the outer cover, F, which receives the wear, that the former is readily secured in place through the opening covered by the latter, and the space to receive rubbish and water reduced to a minimum.

In various kinds of mechanism it is common to have a double seal or cover; but the combinations and arrangements are different from those here shown.

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

1. A man-hole vault-cover provided with two man-hole plates supported by an interior web with the lower cover arranged to make a tight joint on the lower side of the web and shaped so that it can be removed through the man-hole opening.

2. In a man-hole vault-cover provided with a man-hole plate to secure tightness and another to receive the wear, the supports *j j*, or equivalents, for the latter combined with a face on the web B, to form a seat for the former, as and for the purposes specified.

3. In combination with a man-hole vault-cover provided with a man-hole plate to secure tightness and another to receive the wear, the web B, arranged in the man-hole casing, so as to support both the man-hole plates.

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Witnesses:

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