(No Model.)

W. H. BECKWITH.

VAULT COVER.

No. 314,781. Patented Mar. 31, 1885.

Fig. 1.

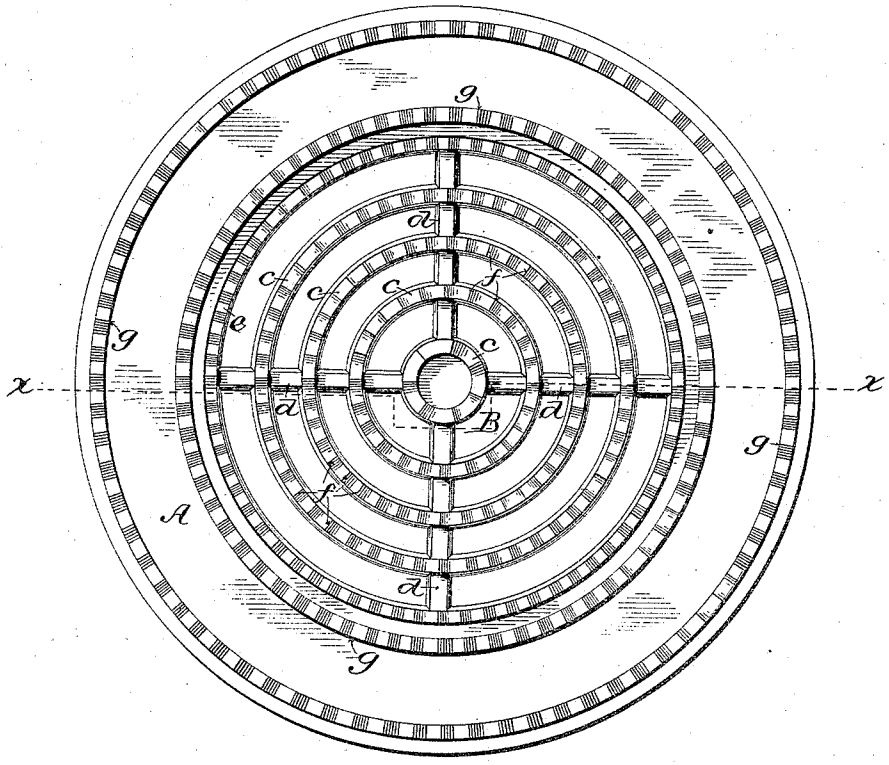
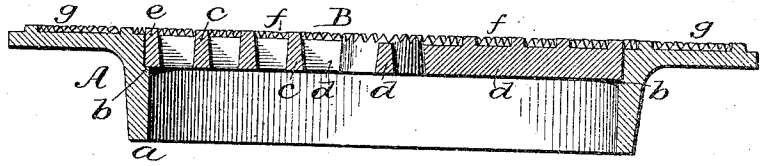


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM H. BECKWITH, OF PITTSBURG, PENNSYLVANIA.

VAULT-COVER.

SPECIFICATION forming part of Letters Patent No. 314,781, dated March 31, 1885.

Application filed January 24, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BECKWITH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Vault-Covers, of which the following is a specification.

My invention relates to vault-covers; and it consists in a novel construction of the same, as hereinafter fully set forth and claimed, whereby air and light are permitted to pass through and slipping is prevented.

In the drawings, Figure 1 is a top plan view of my improved cover, and Fig. 2 is a section of the same on the line *x x*.

The objects of this invention are to prevent slipping, to provide for the escape of gases when used for sewer-openings, and to permit light and air to enter when used for vaults.

A indicates the annular stationary supporting-frame, which is set in or upon the masonry, and which is provided with a depending flange, *a*, and an internal ledge, *b*, as shown in Fig. 2, said ledge supporting the central removable skeleton plate, B, as is usual.

The plate B consists of a series of concentric rings, *c*, arranged in the same horizontal plane, slightly tapered or conical in vertical cross-section, the circles formed by their upper edges having a smaller radius than those formed by the bases of the rings, as is clearly shown in both figures. In the drawings I have shown four of these rings *c;* but it is obvious that their number may be varied as circumstances may require or fancy dictate. Extending radially from the central ring are arms *d*, which are also of A shape or tapering in cross-section, and which serve to connect the rings *c* one with the other and with the circumferential flange *e* of the frame B. Any number of arms *d* may be employed, but three or four will be found sufficient ordinarily. The upper edges of the rings *c* are notched, to form teeth or spurs *f*, as shown, which teeth are made quite sharp. Frame A is also formed with one or more rows of teeth or spurs, *g*, similar to the teeth *f* of plate B. The plate B—that is to say, the rings *c*—arms *d*, and flange *e*, are all cast in one piece complete, the beveled or inclined faces of the arms *d* and rings *c* facilitating the removal of the casting from the mold.

When the cover is constructed, as herein described, with the beveled or tapered rings provided with the teeth or projections, it is almost impossible to slip, as the teeth projecting upward over the entire surface take a firm hold on a shoe bearing thereon in any position.

The cover, as herein shown and described, is cheap and easy to cast, and is not liable to warp in casting. The plate being thus made open, permits the escape of gases arising from sewer-openings, and permits light and air to enter vaults or chambers.

I am aware that solid vault-covers have been provided with concentric rings of projections, and that conical or inclined projections have been used to prevent slipping, and these I do not claim. Under my construction great strength is secured, casting of the cover or plate is facilitated, perfect ventilation is secured, and slipping is practically prevented.

Having thus described my invention, what I claim is—

1. In combination with stationary frame A, removable plate B, composed of concentric rings *c*, and arms *d*, beveled or inclined, as shown.

2. A vault-cover consisting of a series of concentric rings having their peripheries inclined, as shown, and provided on their upper faces with teeth or projections.

3. In combination, stationary frame A, having depending flange *a*, and ledge *b*, adapted to receive a removable plate, B, consisting of concentric rings *c e*, the former beveled, as shown, and provided with teeth or projections *f*, and the beveled arms *d*, connecting the rings *c e*, as and for the purpose set forth.

WILLIAM H. BECKWITH.

Witnesses:

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