(No Model.)

E. OMENSETTER.

VAULT COVER.

No. 275,785. Patented Apr. 10, 1883.

Fig. 1.

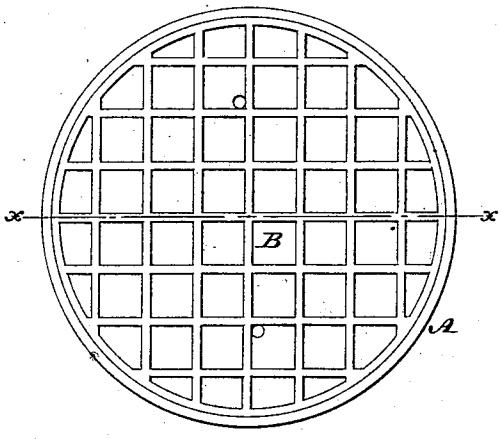


Fig. 2.

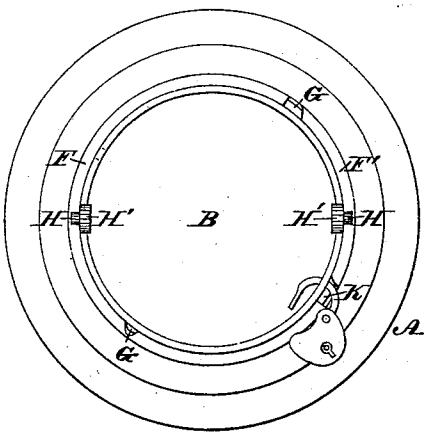


Fig. 3.

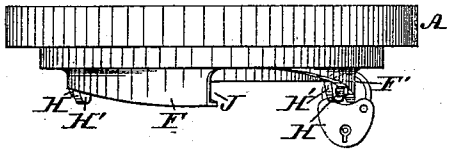


Fig. 4.

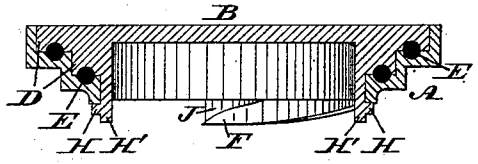
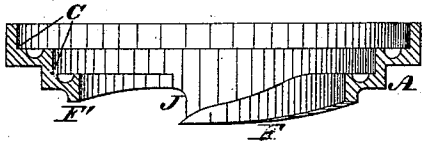


Fig. 5.



WITNESSES:

A. P. Grantz

W. F. Kircher

INVENTOR:

Elkanan Omensetter,

BY John A. Wiedersheim

ATTORNEY

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

ELHANAN OMENSETTER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO A. H. MERSHON, OF SAME PLACE.

VAULT-COVER.

SPECIFICATION forming part of Letters Patent No. 275,785, dated April 10, 1883.

Application filed October 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, ELHANAN OMENSETTER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Vault Covers, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a top or plan view of the vault-cover embodying my invention. Fig. 2 is a bottom view thereof. Fig. 3 is a side elevation thereof. Fig. 4 is a vertical section in line *x x*, Fig. 1. Fig. 5 is a vertical section in line *x x*, Fig. 1, the top being removed.

Similar letters of reference indicate corresponding parts in the several figures.

My invention relates to vault-covers which are clamped down on their supporting-frames by rotation and the engagement of studs or lugs with spiral flanges.

It consists in the particular construction of said flanges and the addition of throats and notches, as hereinafter set forth.

Referring to the drawings, A represents a frame, of the form of an annulus, made of metal or other suitable material, adapted to be supported on a sidewalk, street, &c., over a cellar, an underground station for electric wires, or other vault; and B represents a top or cover proper, which is fitted to and sustained on said frame.

On the upper face of the frame A is a series of annular or concentric depressions or grooves, C, and on the lower face of the top B is a series of concentric depressions or grooves, D, which coincide with the grooves C. In the grooves are fitted annular pieces E of rubber or other suitable packing, which form tight joints between the top and frame and prevent the passage of water or air between them.

Depending from the inner wall of the frame A are flanges F F′, the lower faces of which are spiral, and in said walls are notches G G for the passage of horizontal lugs or pins H, which are secured to or formed with arms H′, which depend from the top B, said lugs projecting outwardly to such extent that when the top B is rotated the lugs ride on the spiral faces of the flanges.

On the inner face of the flange F is a spiral throat, J, which begins at the deepest portion of said flange and terminates upwardly, the inner wall of the annulus or frame A having a notch, K, which is located opposite to the place of upper termination of the throat J.

When the frame A is in position the top or cover B is applied thereto, the lugs H entering the notches G. The top is then rotated, whereby the lugs H ride down the faces of the spiral flanges F, or in the direction of the rise thereof, thus tightening the top on the frame and compressing the packing E between the top and frame, thus holding the top firm and producing tight joints between the parts. A lock or other fastening is then fitted in an opening in the central rim of the top B, whereby the backward rotation of the top is prevented and the cover is secure and reliably retained in position, so that it cannot be opened from above.

When the cover is to be opened the lock or fastening is removed, the lock employed being shown in Fig. 3, and the top B is rotated in the direction the opposite to that required for tightening the same. The lugs H ride back on the flanges F F′, and when the lug which is adjacent to the groove or throat J reaches said throat it enters the same and bears and rides on the lower rising wall thereof, the effect whereof is to elevate the top or cover above the frame A, whereby said top may be conveniently grasped or raised and removed, the notch K and termination of the throat J readily permitting the passage of the lugs H as the top is elevated.

It is evident that the flanges F F′ may have spiral grooves on their sides in lieu of the spiral faces for engagement of the lugs H, without, however, producing different results from those stated.

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

1. A supporting-frame provided with a spiral flange having a spiral throat above it, in combination with a rotary vault-cover having a laterally-extending lug adapted to engage with the lower side of said flange or the upper side thereof, substantially as set forth.

2. A frame, A, having a spiral flange, F, a

throat, J, and a notch, G, in combination with cover B, having a lateral lug, H, said lug being adapted to pass down through said notch and turn under said flange for tightening the cover or to ride up said throat to loosen the cover, substantially as set forth.

3. A frame, A, constructed with spiral flanges F F′, throats J, and notches G K, in combination with cover B, provided with lugs H, substantially as and for the purposes set forth.

4. A frame provided with a series of concentric grooves at different elevations, in combination with a cover provided with corresponding grooves, packing-rings which fit in the grooves between the frame and cover, and devices for clamping said cover down on said frame, substantially as set forth.

ELHANAN OMENSETTER.

Witnesses:
JOHN A. WIEDERSHEIM,
A. P. GRANT.