C. H. GORDON.

Vault-Cover.

No. 168,982. Patented Oct. 19, 1875.

Fig. 1

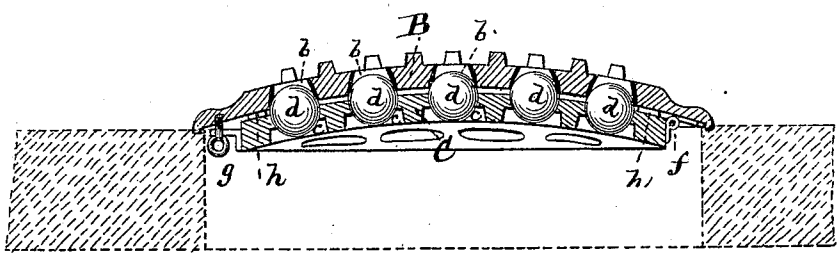
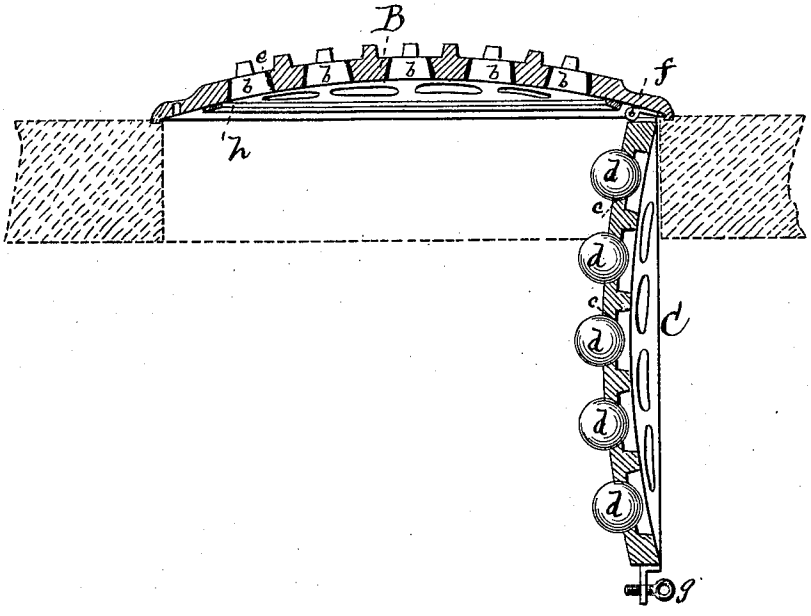


Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES H. GORDON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VAULT-COVERS.

Specification forming part of Letters Patent No. **168,982**, dated October 19, 1875; application filed September 28, 1875.

To all whom it may concern:

Be it known that I, CHARLES H. GORDON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Ventilating and Illuminating Cover for Vaults, Skylights, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to a means for both ventilating and illuminating a vault, building, or vessel, without the necessity for removing the cover.

Heretofore where water-tight illuminating covers have been used for vaults and other places it has been necessary to remove the cover from the opening when it was desired to ventilate the vault or chamber; and in order to prevent accidents to passers-by, or to prevent improper access to the vault or chamber, it has been customary to replace the close cover by a perforated, grated, or other open cover, or a frame-work of some suitable description.

The object of my invention is to obviate the inconvenience referred to, and at the same time to provide for both illumination and ventilation by means of the same cover. To this end the invention consists in a cover made in two parts, one of which is provided with openings for ventilation, and the other with lenses or illuminating glasses arranged in recesses corresponding in location with the ventilating-openings, as will be fully hereinafter described, and pointed out in the claim.

The accompanying drawing illustrates the construction and operation of my improved cover and its application to an opening in a vault or other chamber.

Figure 1 shows the two parts fastened closely together, forming a water-tight illuminating-cover. Fig. 2 shows the two parts connected by a hinge, with the lower part hanging down to provide for ventilation through the upper.

The top portion of the cover consists of a plate, B, which may be similar in construction to iron vault-covers in common use. This plate is provided with a number of perforations or openings, *b*, of suitable size to allow of ventilation through the same. The plate B may be of round, square, or other suitable form, corresponding with that of the opening to which it is applied. It may be secured to the edges of the opening in any suitable manner, and may be packed or cemented to prevent the entrance of water around the edges. The lower portion of the cover consists of a plate, C, resembling the upper plate in form, but sufficiently smaller to allow it to work freely in the opening covered by the upper plate. The plate C is provided with recesses *c* at points corresponding with the perforations or openings *b* in the upper plate. In the recesses *c* the lenses or illuminating glasses are secured by cement or other suitable means. These glasses *d* may be of any suitable shape; but I prefer to make them of spherical or approximate form, as shown, so that when the two parts of the cover are together the removal of the glasses will be impossible. The openings *b* in the top plate may be provided with elastic packing, *e*, to insure the close fitting of the lenses, and may be larger below than above. The lower plate C may be entirely detachable from the upper one, or it may be connected thereto by a hinge, *f*, as shown. It is also provided with a screw, *g*, or other suitable fastening, for securing it in place against the upper plate. To one of the plates is attached a gasket or packing ring, *h*, of rubber or other suitable material. When the two plates are fastened together, as shown in Fig. 1, they form a water-tight illuminating-cover, the lenses *d* admitting the light, and the gasket or packing ring *h* preventing the passage of water below the lower plate. When it is desired to ventilate the vault or other chamber the lower plate is unfastened, so that it may be removed or suspended by its hinge, as shown. By this means the vault or chamber may be ventilated without removing the cover.

This invention is applicable to various purposes besides vault-covers. It may be applied to skylights or deadlights for buildings and vessels, to the steps of stairways, and to any of the purposes for which a ventilating and illuminating cover is used. The shape and dimensions of the cover may be varied to suit the circumstances under which it is used. If desired, the lower plate may be

made in two or more parts, hinged or otherwise connected together.

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

The upper and lower plates B and C, constructed with a series of perforations, *b* and *c*, substantially as described, in combination with the lenses *d* fixed within the recesses *c* of the lower plate, substantially as and for the purpose described.

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