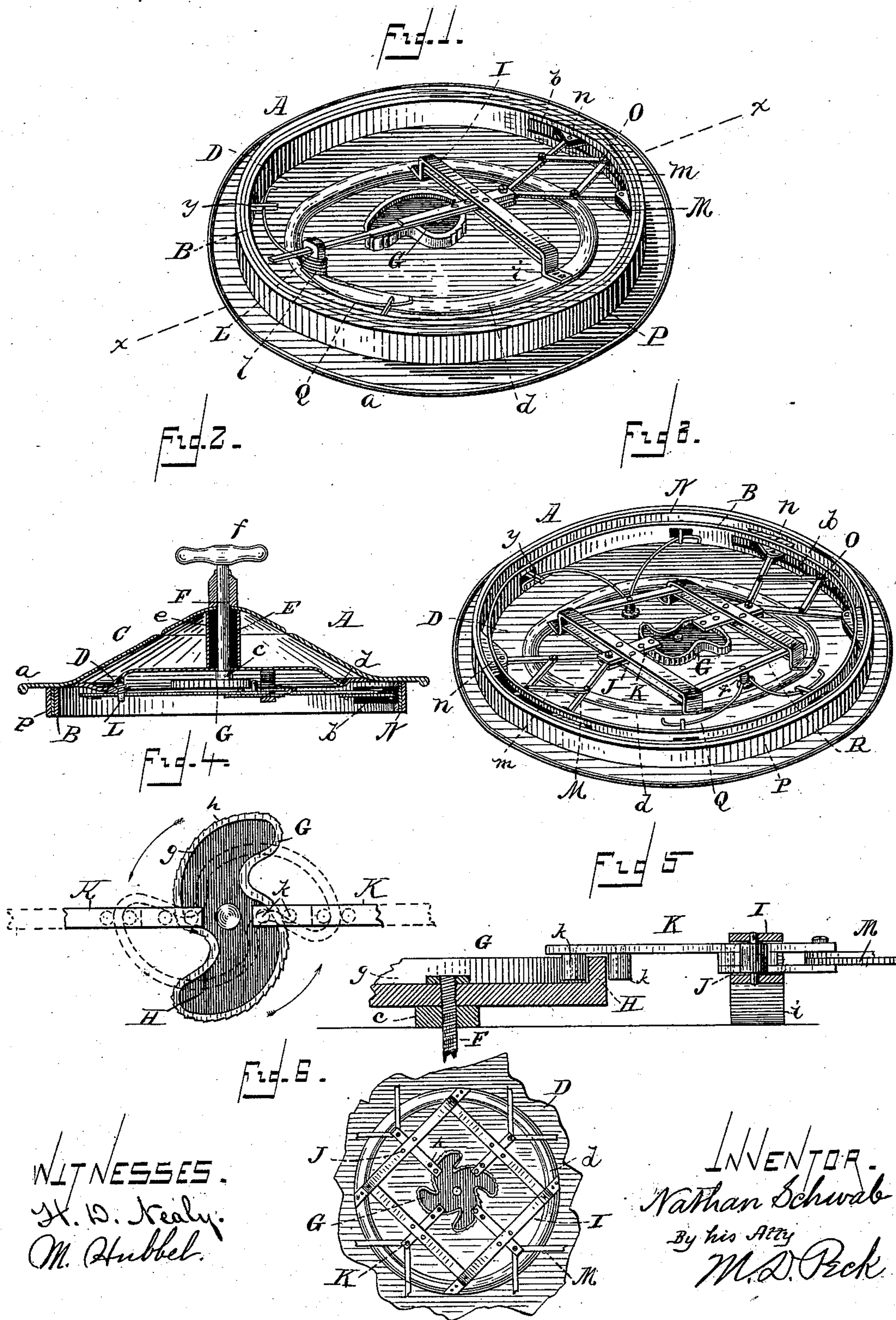


(No Model.)

N. SCHWAB.  
GAS TRAP COVER.

No. 362,542.

Patented May 10, 1887.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

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## GAS-TRAP COVER.

SPECIFICATION forming part of Letters Patent No. 362,542, dated May 10, 1887.

Application filed March 8, 1887. Serial No. 230,149. (No model.)

*To all whom it may concern:*

Be it known that I, NATHAN SCHWAB, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas-Trap Covers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to that class of a gas-trap covers for wash-basins, closets, chambers, and the like, for sealing the vessels to prevent the escape of noxious and poisonous gases into the bed-chamber and other apartments of the house.

In view of the many kinds of diseases of a low type, such as fevers and malaria, that have been contracted in sleeping-apartments having stationary wash-stands, the object of my present invention is more especially to provide an improved cover, that can be quickly and easily adjusted to any of the ordinary-sized basins of wash-stands, so located and connected with the main sewer in the street as to furnish an airtight trap, rendering the escape of gas into the house impossible until the cover is removed; and it consists in the construction hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of the underside of my improved cover ready for use. Fig. 2 is a vertical sectional view on the line *x x* of Fig. 1, showing the cover right side up and the parts in position to be expanded. Fig. 3 is a perspective view of the under side of a cover, in which I use a double cam and two adjusting-bars. Fig. 4 is an enlarged detail view of the double-acting cam in solid lines when the arms are contracted and in dotted lines when they are expanded. Fig. 5 is a part sectional view of the cam, showing its connection with the adjacent parts. Fig. 6 is a plan view of the under side of the cover broken away, showing a modified form, with a quadruple cam and the necessary adjusting-arms.

Like letters of reference refer to corresponding parts in each figure of the drawings.

A represents the cover, composed of any desired kind of sheet metal, as copper, brass, white-metal, or other material adapted for the purpose, of a size sufficient to cover the largest ordinary wash-basin, having a rim, B, extending downward from its under side to fit within the basin, said rim being within the circumference of a horizontal flange, *a*, adapted to rest upon the top or edge of the basin. The central portion of the cover is stamped or spun up to form a cone, C, upon its upper side, and on the under side of the cone there is a bottom, D, which extends over entire under side of the cover, within the rim B, on substantially the same plane with the flange *a*.

The bottom D is re-enforced or spun up at *d* to give it additional strength for the attachment of other parts, and to form a recess or chamber under its central portion for the operation of a cam-lever.

Within the center, and secured to the under side of the top of the cone C and to the bottom D, there is a tube, E, in which is placed a piston-rod, F, that extends downward through the bottom and upward above the top of the cone, where it is provided with a handle, *f*.

Within the tube E there is placed a packing, *e*, of rubber, felt, or other soft elastic material, to prevent the escape of gas through the opening around the piston-rod.

Below the bottom D, on the rod F, there is a sleeve or washer, *c*, and beneath the washer there is a cam, G, secured to the lower end of the piston-rod, having a recess, *g*, in its lower side guarded by a flange, H, around the edge of the cam, which is serrated on its periphery *h* for the purpose of holding the cam in any desired position in which it may be placed.

To the under side of the re-enforced portion *d* of the bottom, and at one side of the edge of the cam, there is secured a double loop-support, I, that extends from one side to the other, which is bent at *i* to reach below the plane of the lower surface of the cam G.

On each side of the center of the loop-support there are journaled guide-rollers J, that extend upward from the support, and between



which there is an adjusting-bar, K, that extends over the under side of the cam and slides in a mortise in the lower end of a post, L, secured to the bottom D.

5 On the upper side of the adjusting-bar K, where it rests on the flange H of the cam near the loop-support, there are journaled rollers *k*, one of which moves within the recess *g* and the other upon the serrated periphery of the  
10 cam.

The outer end of the adjusting-bar K has a double head, in which are pivoted bar-arms M, that gradually diverge from each other as they distance from the bar, and pass through long  
15 slots *b* in the rim on the under side of the cover, and are pivotally connected to slotted lugs *n*, near the free ends of an adjustable band, N, on the outside of the rim.

Between the bar-arms M there is a post, O, secured to the side of the slotted rim B, in  
20 which are pivoted spreader-arms *m*, that are pivoted at their opposite ends to the bar-arms at about midway their length.

As the cam G is turned around by means of the handle *f* its flange H moves between the  
25 rollers *k*, forcing outward the adjusting-bar K against the bar-arms, which are gradually separated at their outer ends by the spreaders *m*, carrying with them the adjustable band N, which is forced out from the circumference of  
30 the rim.

Around the band N there is placed an elastic gasket or ring, P, of rubber, felt, cork, papier-maché, or other suitable material, adapted  
35 to be expanded on the band as it is enlarged or forced outward until it comes in contact and forms an air-tight joint with the sides of the basin or vessel in which it is placed.

The post L has a spring, *l*, coiled around its  
40 body, which has curved arms Q laterally extended outward to the rim and passing through the ends of slotted guides *q*, which are secured to the adjustable band N outside, and pass through slots in the rim for the pur-  
45 pose of producing traction on the band to draw it back to its seat against the rim when the cam is reversed and the extended band on the opposite side is drawn back by the arms M.

If desired, a double cam, G, may be used, as  
50 shown in Figs. 3 and 4, having separate adjusting-bars K, working through loop-supports I, opposite to each other, and attached to the adjustable band N by arms M, and the curved spring-arms Q may be attached to posts *r* on  
55 cross-bars R, extending between the ends of the loop-supports on each side, and be fastened to the adjustable band in the same manner, and for the same purpose, as hereinbefore described. A quadruple cam, G, may be used  
60 also as shown in Fig. 6 in which case there are four adjusting-bars, K, which are operated on different quarters of the adjustable band N at the same time. In this construction the double loop-support is made to form a rectan-  
65 gular frame, which is secured to the bottom,

and in the middle portion of each side there are journaled guide-rollers J, between which the bars K are supported, and operated by means of the cam working on the rollers *k*, forcing the bars outward upon the arms M, as  
70 hereinbefore described, which expand or contract the adjustable band N, as desired, at all required points, rendering the spring-arms Q unnecessary.

Having fully described my invention, what I  
75 claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with a gas-trap cover having an adjustable band outside the rim, of  
80 a cam on the under side of the cover attached to and on the same plane with adjusting-bars connected with said band, as set forth.

2. The combination, with a cover having an adjustable band outside the rim, of a cam on  
85 the under side of the cover, attached to adjusting-bars in loop-supports connected with said band, as set forth.

3. The combination, with a cover having an adjustable band outside the rim, of a cam on the  
90 under side of the cover, attached to two or more adjusting-bars working through loop-supports and connected with and expanding said band in different directions at the same time, as set forth.

4. A gas-trap cover having a piston-rod  
95 therein secured to a recessed cam on the under side of the cover, said cam being attached to adjusting-bars by rollers for expanding a band outside the rim, as set forth.

5. A cover with a re-enforced bottom within  
100 its rim, having loop-supports secured thereto for carrying adjusting-bars for expanding a band outside the rim, as set forth.

6. A cover having double loop-supports se-  
105 cured to the re-enforce of the bottom, with rollers on each side of the center between the bars of the support to guide an adjusting-bar for expanding and contracting a band outside the rim, as set forth.

7. The combination, with a conical cover hav-  
110 ing a tube under the cone, containing a packing with a piston-rod therein, of a re-enforced bottom on substantially the same plane as the flange outside the rim, said bottom having a recess or chamber within the re-enforce for a  
115 cam attached to the lower end of the piston-rod, as set forth.

8. The combination, with a conical cover hav-  
120 ing a piston-rod passing through a tube therein, of a cam recessed on its under side, and having a flange at its edge serrated on its periphery attached to the lower end of the rod, said cam being connected with an adjusting-bar for expanding a band outside the rim, as set forth.

9. The combination, with a cover having a  
125 recessed cam on its under side, provided with a flange at its edge, serrated on its periphery, of an adjusting-bar having rollers near its end, one working in the recess and the other against the serrated edge of the flange in expanding  
130



and contracting an adjustable band outside the rim, as set forth.

10. The combination, with a gas-trap cover having a cone with a tube therein, provided  
5 with a packing and a piston-rod for expanding a band outside the rim, of a cam recessed on its under side and secured to the rod underneath the bottom and to adjusting-bars by rollers journaled thereon, said bars having

loop-supports with rollers therein on each side of the bars, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

NATHAN SCHWAB.

Witnesses:

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HENRY NAEF.