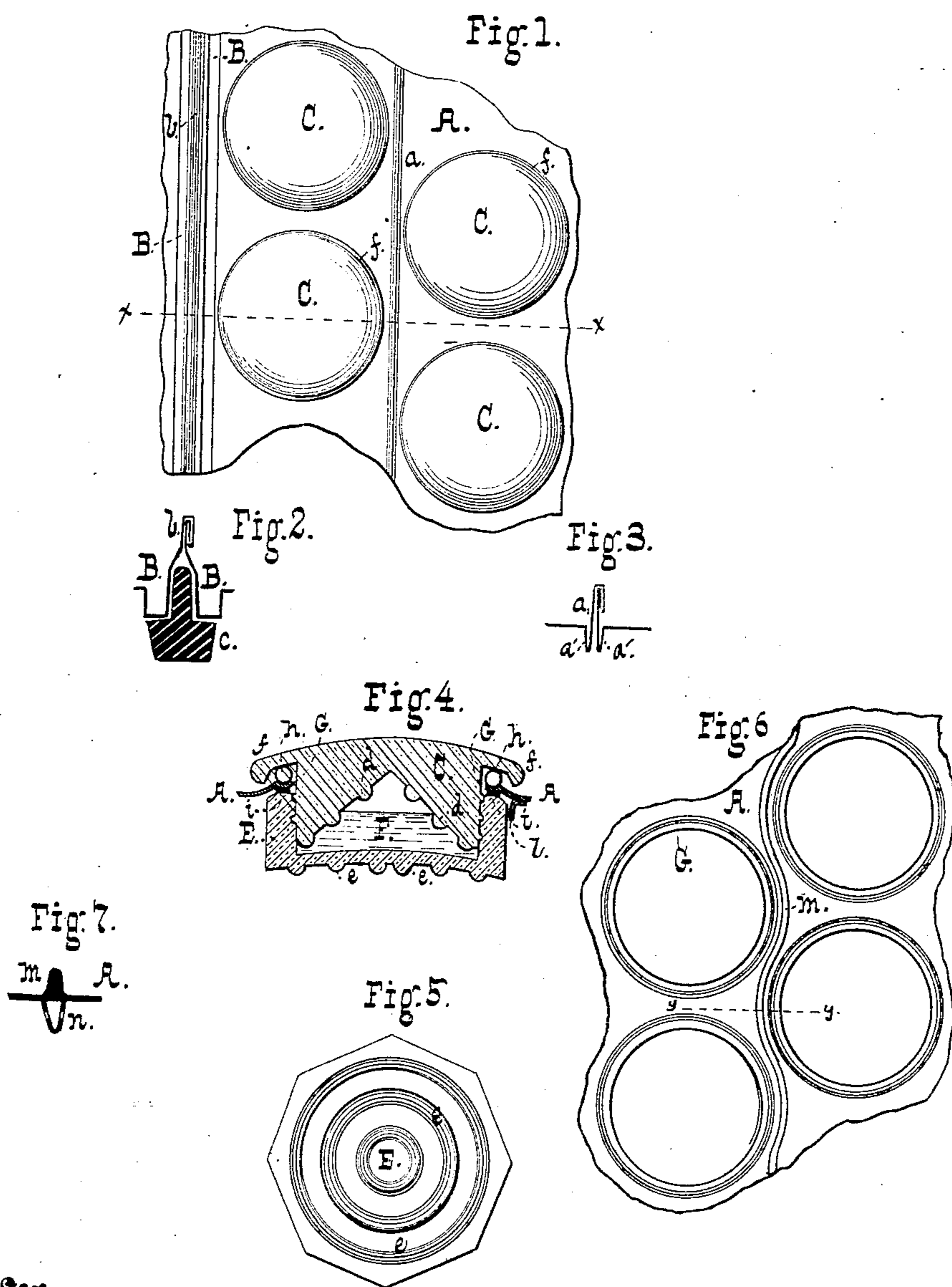


(No Model.)

J. W. GEDDES.  
Skylight.

No. 232,399.

Patented Sept. 21, 1880.



Witnesses,  
W. a. Betham  
Dr. M. Barclay.

Inventor,  
JAS W. GEDDES.

by  
A. D. Williams  
Attorney.

# UNITED STATES PATENT OFFICE.

JAMES W. GEDDES, OF BALTIMORE, MARYLAND.

## SKYLIGHT.

SPECIFICATION forming part of Letters Patent No. 232,399, dated September 21, 1880.

Application filed March 19, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. GEDDES, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Skylights; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of a part of a skylight embodying my invention; Fig. 2, a sectional view of the supporting bar or girder and the sheet-metal frame on line *x x*, Fig. 1; Fig. 3, a similar view of the junction-bead on same line; Fig. 4, a central sectional view of a bull's-eye, and Fig. 5 a bottom plan of the lower member of the bull's-eye; Fig. 6, a top plan of a modification of the frame; Fig. 7, a section on line *y y*, Fig. 6.

My invention has reference to that class of skylights in which a number of glass bull's-eyes are secured in a metallic frame; and it consists in certain points of novelty in the bull's-eye, the frame-work, and the connections of the same, as hereinafter fully set forth.

In the accompanying drawings, A is a sheet-metal frame having suitable apertures for the bull's-eyes. The sections of frame are double-seamed and beaded, as shown at *a*, Fig. 3, the metal being bent downward, as shown at *a'*, whereby provision is made for expansion and contraction, and an open intervening space is afforded for ventilation, as illustrated. The metal is similarly double-seamed at *b* over the supporting beams or girders *c*, (see Fig. 2,) and a gutter, B, is formed at either side to shed water, and also to afford provision for expansion and contraction.

The edges of the sheet-metal frame are grooved, as shown at G, to receive the tubular annular washers *h*.

The bull's-eye consists of two parts, C and E. The former is made convex on top, (on the principle of an ordinary periscopic lens,) and has a downwardly-projecting flange, *f*. It is cast with a thread on its cylindrical surface, and is hollowed beneath, as shown, the conical surface being provided with diffraction-beads *d d*. The other member, E, also of glass, is formed with a female screw-thread, as shown, is cup-shaped in form, and has a polygonal periphery. This latter feature sub-

serves two widely-different ends. It affords facility for screwing the members of the bull's-eye together, and also effects the diffraction or dispersion of the transmitted rays of light. Its base is beaded, as shown at *e*, for the latter purpose.

A tubular annular washer, *h*, of india-rubber or equivalent material, is laid in the groove G, and the part C being inserted through the aperture in the frame A, the lower member, E, is screwed upon it, a washer, *i*, being by preference inserted between it and the frame.

The space F within the bull's-eyes may be filled, or partly filled, with tinted glycerine or chloride-of-calcium solution, or any other non-congealable liquid, as may be desired.

Little braces or holders *l* may be attached to the frame to prevent the possibility of the part E from unscrewing.

The peculiar construction of the bull's-eyes secures the maximum of illumination and effects a proper and uniform diffusion of the light.

Instead of a thread, the parts may have a bayonet-joint or equivalent means for connection.

In Fig. 6 is shown a modified form of the device, used for sidewalk-skylights. Here the frame A is cast with a zigzag bead, *m*, high enough to prevent the bull's-eyes from being trod upon, and adapted to conduct the water to the edge of the skylight. On the under side of the frame, below this bead, is a hollow perforated bead, *n*, for purposes of ventilation.

What I claim is—

1. In a skylight, a metallic frame-work containing panes or bull's-eyes and having the seam and expansion-gutter *a a'*, as set forth.

2. In a sheet-metal frame for skylights, and in combination with the beaded girder *c*, the seam *b* and gutters B, as set forth.

3. A skylight bull's-eye consisting of two glass members adapted for connection, as set forth.

4. A skylight bull's-eye consisting of two hollow members adapted for connection, as set forth.

5. A skylight bull's-eye consisting of two hollow glass members threaded and beaded, as set forth.

6. A skylight bull's-eye having an interior

space for containing a colored liquid, as set forth.

7. In combination with the frame and two-part bull's-eye, the catch *l*, as set forth.

5 8. In combination with the flanged member C, the polygonal member E, adapted for attachment to the same, as and for the purpose set forth.

9. The frame A, having zigzag beads *m* and *n*, the latter being hollow and laterally perforated, as set forth. 10

Witness my hand this 17th of March, 1880.

JAMES W. GEDDES.

Witnesses:

R. D. WILLIAMS,

CHARLES A. VAILE.