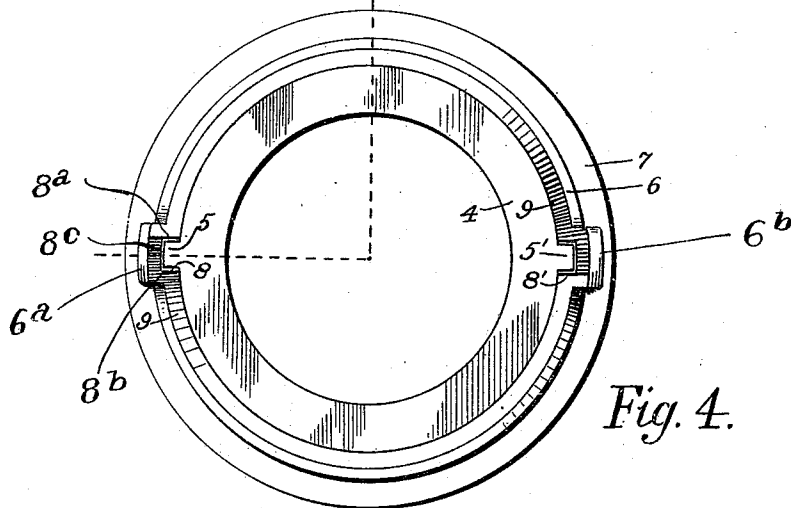
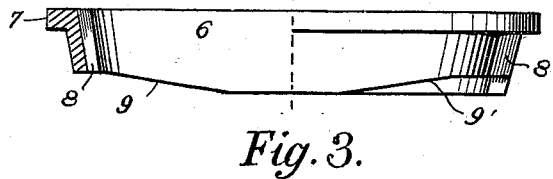
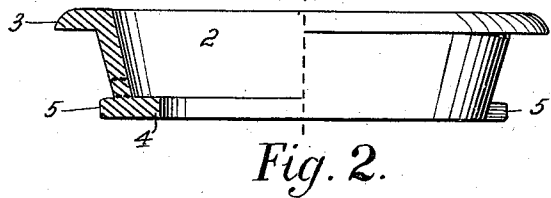
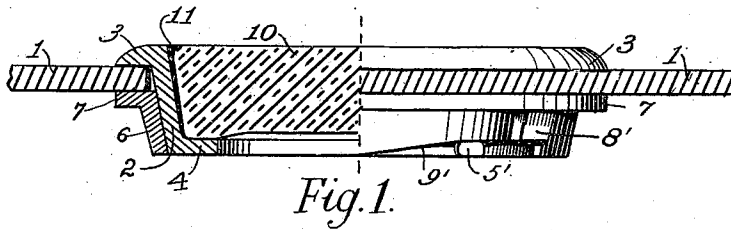


J. J. LAWLER.
VAULT LIGHT.
APPLICATION FILED FEB. 2, 1910.

979,772.

Patented Dec. 27, 1910.



WITNESSES:

Edgar M. Greenbaum
Arthur E. Dempsey

INVENTOR

James J. Lawler

BY *E. J. Linn*
ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES J. LAWLER, OF PELHAM HEIGHTS, NEW YORK.

VAULT-LIGHT.

979,772.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed February 2, 1910. Serial No. 541,450.

To all whom it may concern:

Be it known that I, JAMES J. LAWLER, a citizen of the United States, and resident of Pelham Heights, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Vault-Lights, of which the following is a specification.

My invention relates more particularly to providing a receptacle for prisms or "bulls' eyes" in vault doors and the like, the object being the production of a seating cup having a continuous unbroken support for the prism, held in position without the use of rivets or screws, and adapted for coating with metal, such as galvanizing or tinning, after the parts are fastened together preparatory to inserting the prisms.

My invention is shown in the accompanying drawings, in which—

Figure 1, is a side elevation in center section of a complete receptacle and prism in place; Fig. 2, is a side elevation, in center section, of the inner ring which holds the prism; Fig. 3, is a side elevation, in center section, of the outer retaining ring and Fig. 4, is an inverted plan view of the two rings, placed together just prior to fastening.

My invention is equally applied to roof housing of elevator shafts, side panels in doors and in other structures where it is desired to have light weight while for folding doors over cellars or areas the strength can be increased by cross ribbing or webbing as usual in common practice.

By way of example the adaptation of the invention is illustrated in the drawings as securing bulls' eyes to a perforated piece of sheet iron, the latter is indicated by the reference character 1 and is provided with a circular opening through which extends the support for the prism 10. The support for the prism is adapted to be clamped to the sheet iron 1 by a coupling member. The support for the prism 10 consists of a hollow conoidal shape body portion 2 having its outer end formed with a laterally-projecting and outwardly-extending annular flange 3. The inner end of the body portion is formed with an inwardly-extending annular supporting flange 4 for the prism 10. The flange 4 is flushed with the inner end of the body portion 2. At diametrically opposite points, the body portion 2 is formed with laterally-extending and outwardly-projecting lugs 5, 5' which are flushed with

the flange 4. The body portion is adapted to be positioned in the coupling member which will be presently referred to and the outwardly-extending flange 3 of the body portion is adapted to extend over and upon the outer face of the sheet iron 1, as clearly shown in Fig. 1 when the body portion is in operative position.

The coupling member comprises a hollow conoidal body portion 6 having at diametrically opposite points outwardly-extending offset portions 6^a and 6^b. The body portion 6 is formed with a pair of diametrically opposed pockets 8—8' which extend from the outer to the inner end of the body portion and are formed by cutting entirely through the wall of the body portion and partially through the offset portions 6^a and 6^b. Each of the pockets 8—8' is formed with a pair of side walls 8^a and 8^b and an inner wall 8^c, the front of each of the pockets being open from end to end of the body portion. The inner end of the body portion 6 and also the inner end of each of the offset portions is cut away to provide a pair of inclines 9, 9' which extend a short distance from the wall 8^a of each of the pockets thereby cutting away the inner portions of the walls 8^b and 8^c so that the height of these latter walls will be less than the height of the wall 8^a and the inner projecting portion of the wall 8^a will constitute a stop for one of the lugs 5. The other end of the body portion 6 is provided with a laterally-extending and outwardly-projecting flange 7 which when the coupling member is in its operative position is adapted to engage the inner face of the sheet iron 1 so that it will be clamped between the flanges 3 and 7.

The shape of the two rings is tapered and of a size that one snugly fits over the other when in position as shown in Fig. 1.

The construction is such that very little daylight is lost and if stamped up of sheet steel this loss can be materially reduced owing to the thinner walls of metal; in this case the lugs are punched from the sides of the inner ring and bent outward, as shown by dotted lines in Fig. 2. The outer ring is also easily formed by stamping.

Any shape of a prism, 10, may be used and held in place by suitable cement, 11, shown by the solid black line.

Such being the construction, the operation is as follows:—When the desired number of round holes are drilled, or pierced in

the iron sheet which is to form the structure, the inner ring which supports the prism is inserted in a hole until it rests on the upper flange; the lower or outer ring is then slipped over the projecting part of the inner ring, the lugs entering the pockets, (shown in Fig. 4) and by turning to the right, when the lugs project, said lugs are forced up the incline and the two rings drawn tightly together. All the holes are filled with rings in a like manner, when the article is "pickled" and suspended in a bath of molten metal so that all the points will be made water tight, and at the same time fasten all parts together into a concrete mass, the metal running off and leaving a smooth surface. The section or door can then be taken to the place where it is to be erected and the prisms inserted at will.

As these structures are usually made of iron or steel, by the process of galvanizing or tinning they are rendered rustless for a long time.

If the rings are made of cast metal, the shape and construction are such that no core boxes or other comparatively expensive means are required to produce them, therefore they can be produced at a minimum cost and as no screw or rivet holes are used this expense of labor is saved besides leaving the structure stronger by reason of their absence.

Such being my invention, what I claim as new is:—

In combination, a receptacle comprising a conoidal shaped body portion having its outer end provided with an outwardly-ex-

tending annular flange and its inner end formed with an inwardly-extending annular flange for supporting a prism within the receptacle, said body portion further provided at diametrically opposite points with a pair of outwardly-projecting lugs flush with the inner flange, a coupling member comprising a conoidal shape body portion surrounding the body portion of the receptacle and having diametrically opposed and outwardly-projecting opposite portions and further provided at diametrically opposite points with pockets extending through the wall of the body portion and into the offset portion, said pockets providing means for the passage of the lugs of the receptacle when mounting the coupling member thereon, and said coupling member further having its body portion cut away to provide a pair of inclines extending a short distance from one of the side walls of the pockets whereby the said side walls will constitute stops for limiting the movement of the lugs in one direction, said coupling member further having its body portion provided with an outwardly-extending annular flange associating with the flange of the body portion of the receptacle for clamping the receptacle to a support.

Signed at New York city in the county of New York and State of New York this 31st day of January A. D. 1910.

JAMES J. LAWLER.

Witnesses:

CHARLES V. DWYER,
EDGAR M. GREENBAUM.