

(No Model.)

A. McDOUGALL.
DEAD LIGHT.

No. 469,913.

Patented Mar. 1, 1892.

Fig. 1.

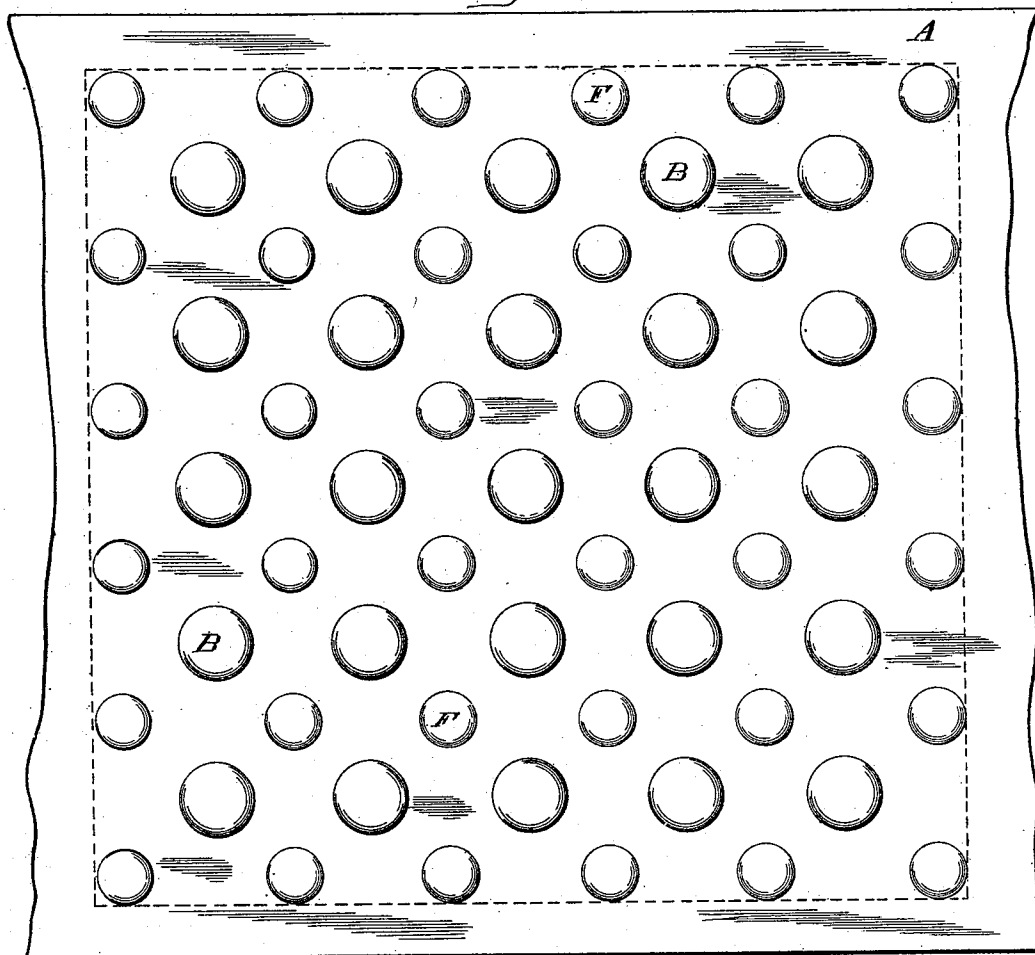
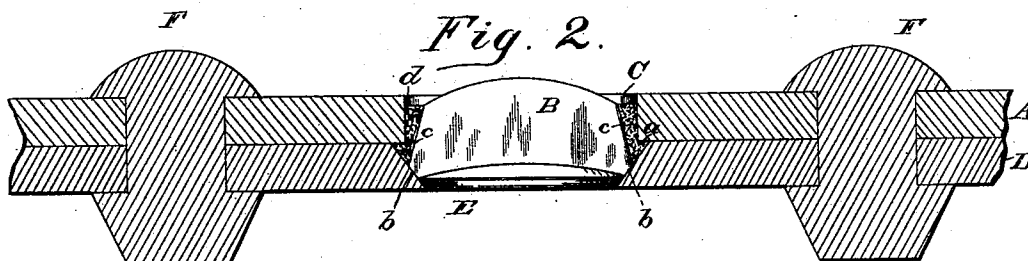


Fig. 2.



WITNESSES

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DEAD-LIGHT.

SPECIFICATION forming part of Letters Patent No. 469,913, dated March 1, 1892.

Application filed May 22, 1891. Serial No. 393,771. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER McDOUGALL, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Dead-Lights; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in the means of securing glass dead-lights to iron plates.

The invention is applicable in securing dead-lights to the decks of iron vessels, or to sidewalks or buildings, or in other connections.

The principal object of the invention is to provide a means whereby dead-lights may be secured easily and firmly in place on metal plates.

Another object is to provide a means whereby the dead-lights which are so placed in position will be protected from injury by objects dropping on them.

For a better comprehension attention is directed to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a top elevation, and Fig. 2 a sectional view.

In each of the above views corresponding parts are designated by the same letters of reference.

A is the plate in which it is desired to secure the dead-lights B. In the drawings this plate is intended to represent the top or deck of those vessels which I have invented and which have heretofore been patented by me; but it should be understood that I do not limit the scope of my invention to this particular application, since it may be used in numerous other connections.

The plate A is punched or drilled with a number of holes C, which are preferably cylindrical and which should be about two inches in diameter, although of course the size thereof is immaterial. Secured to the under side of the plate A is another plate D. The plate D is provided with a number of holes E, which coincide in location with the holes C. The holes E are preferably formed

by punching or drilling a cylindrical hole of smaller diameter than C, and then it is reamed outwardly, as shown in Fig. 2, so that its upper end will be of larger diameter than the hole C. After the two holes E C have been thus formed the plate D is secured to the under side of the plate A by means of ordinary rivets F. The upper heads of the rivets F are quite prominent, so as to form a protection for the dead-lights, as will be understood. When the two plates have been secured together, a small shoulder *a* is formed by the bottom of the plate A around the holes C, as will be seen in Fig. 2.

Each dead-light B is made slightly convex, so as to properly deflect the light, and should be of a size to enter the holes C. Each dead-light is provided with a small inclined portion *b*, which rests on the inclined sides of the holes E. The sides *c* of each dead-light are inclined slightly, as shown in Fig. 2. After the dead-lights have been placed in position in the plates cement *d* is placed in the hole C, so as to tightly surround the dead-lights. As soon as this cement sets or becomes hardened it will hold the dead-light firmly in position, owing to the fact that the dead-lights are larger at their lower end than at the top. The cement itself will be held in place, owing to the fact that it engages beneath the small shoulders *a a*. The kind of cement which is to be used is to be made, preferably, of brimstone and lamp-black; but it should be understood that any other suitable cement may be used. It should also be understood that the plate D may be bolted on top of the plate A, in which case the holes C should be made in the plate D and the holes E should be made in the plate A. It will be further understood that when the present invention is to be applied to vessels the cement *d* will also perform the additional function of excluding water from around the dead-lights.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

1. The combination of the plate A, having holes C therein, plate D, having inclined holes E therein, dead-lights B, resting on the inclined sides of the holes E and provided with

inclined sides *c c*, and cement *d* for holding said dead-lights in position, substantially as set forth.

2. The combination of the plate A, having
5 holes C therein, the plate D, having inclined holes E therein and secured to the plate A so as to form shoulders *a a*, the dead-lights B, resting on the inclined sides of the holes E

and provided with inclined sides *c c*, and the cement *d* for holding the dead-lights in place, so substantially as set forth.

ALEXANDER McDOUGALL.

In presence of—

M. J. MULLIN,

CHAS. W. LELAND.