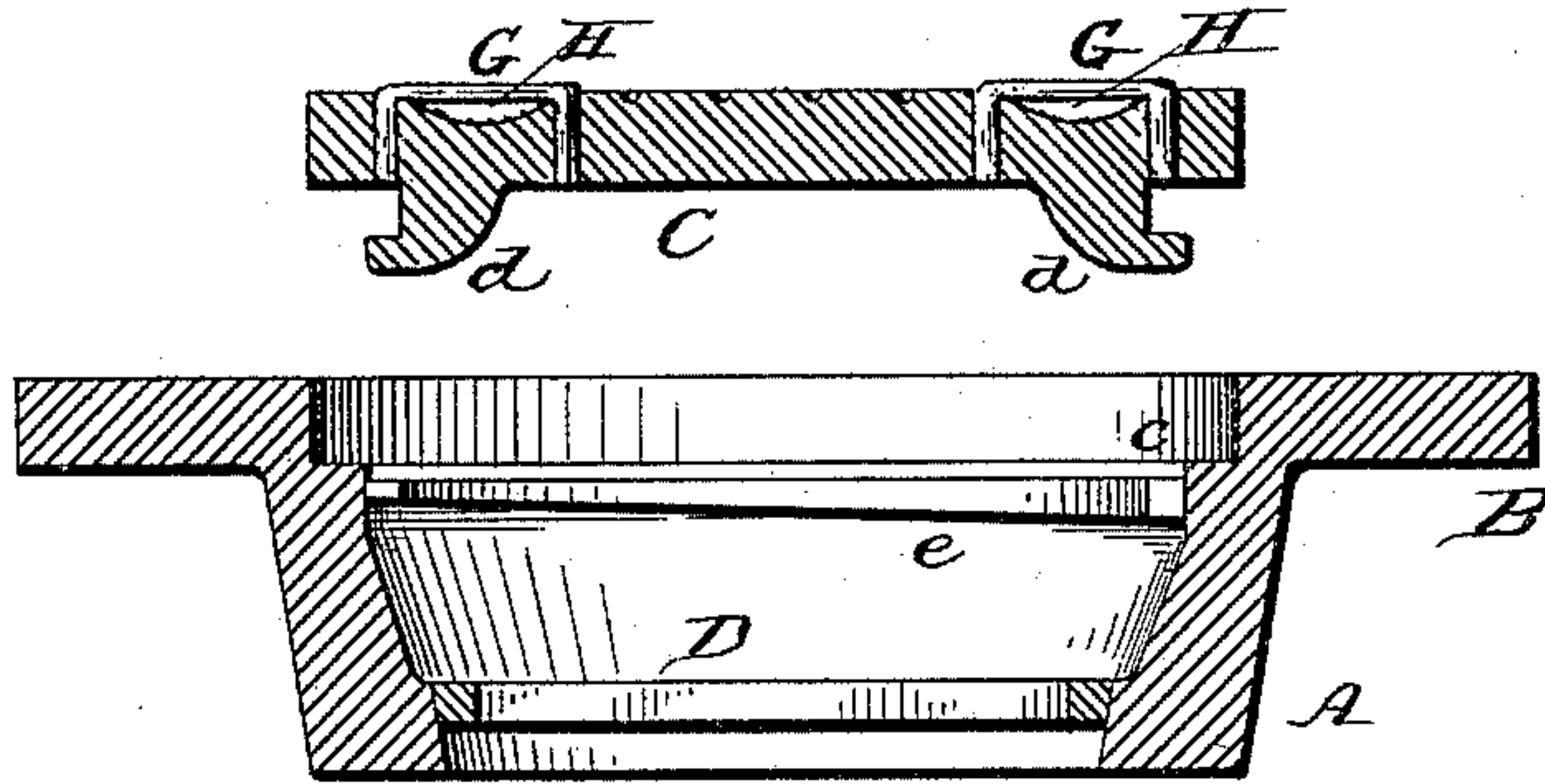


W. W. REYNOLDS.  
COVER FOR COAL BUNKERS.

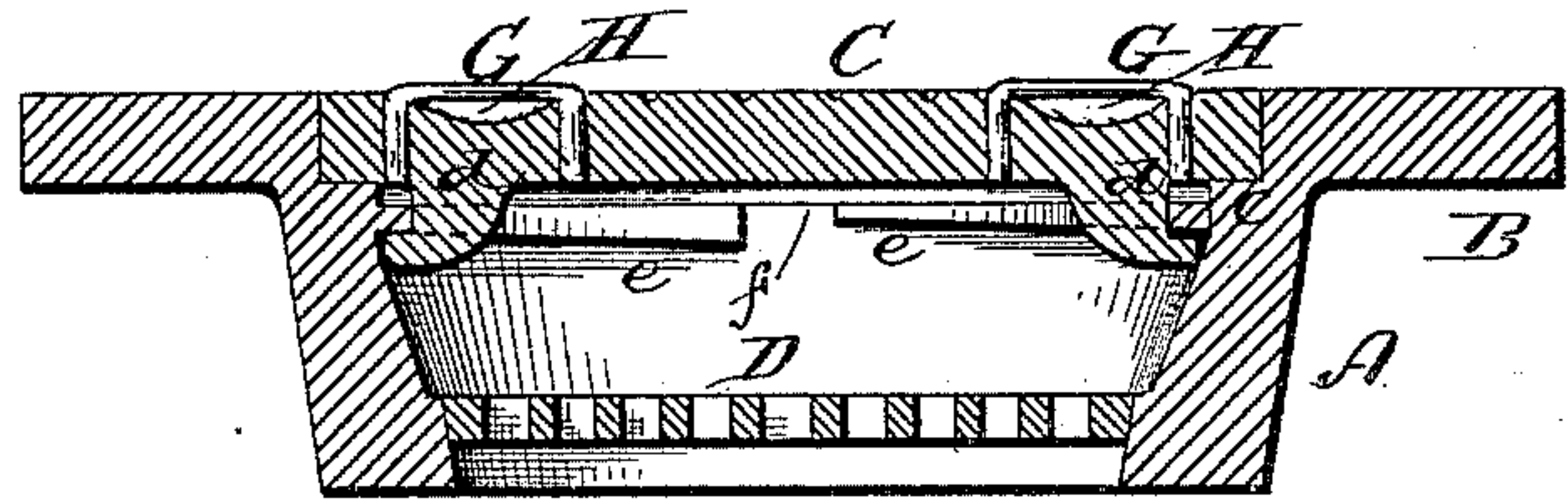
No. 462,163.

Patented Oct. 27, 1891.

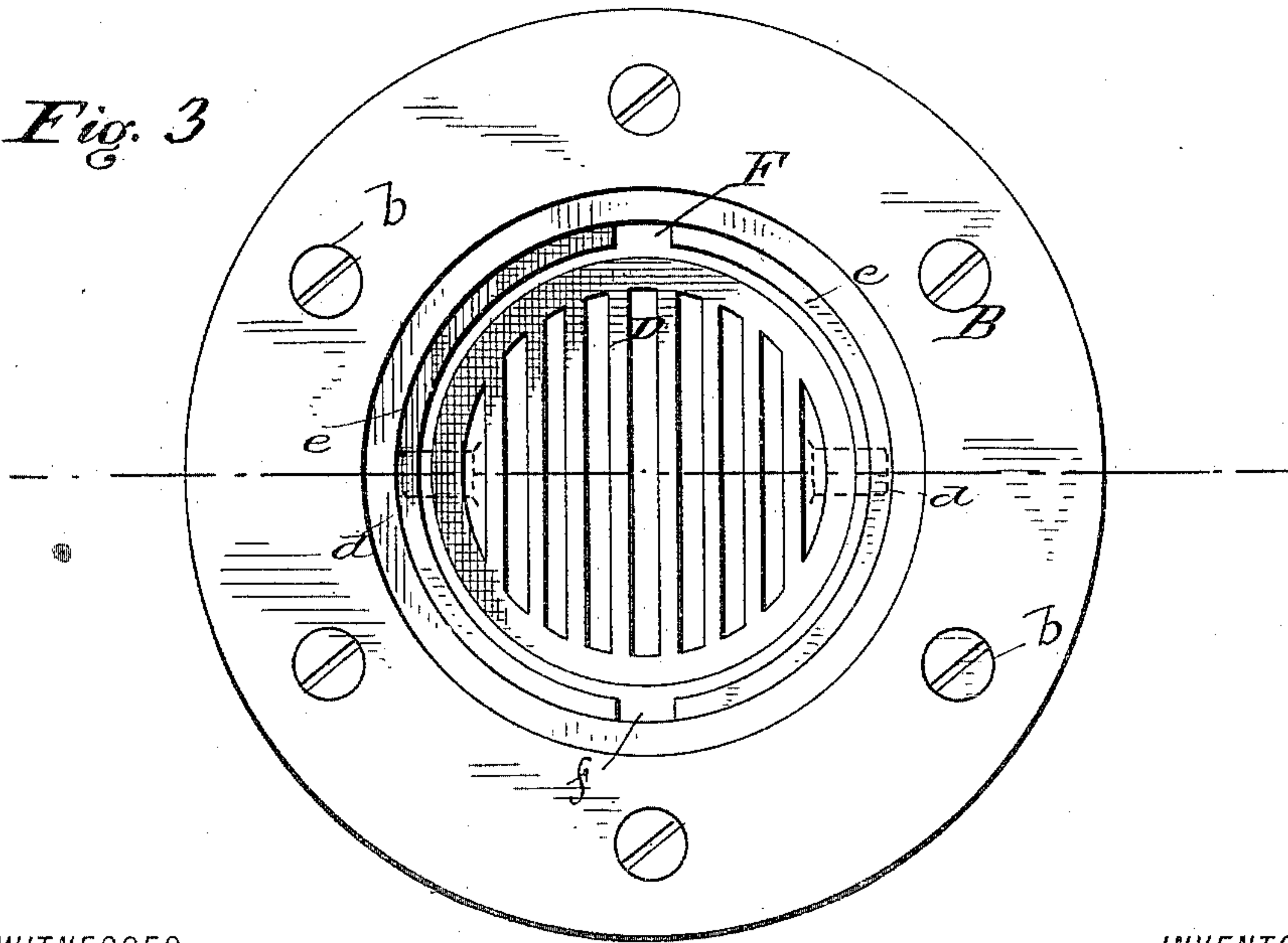
*Fig. 1*



*Fig. 2*



*Fig. 3*



WITNESSES:

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INVENTOR

*W. W. Reynolds*

BY

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ATTORNEYS



# UNITED STATES PATENT OFFICE.

WILLIAM W. REYNOLDS, OF PHILADELPHIA, PENNSYLVANIA.

## COVER FOR COAL-BUNKERS.

SPECIFICATION forming part of Letters Patent No. 462,163, dated October 27, 1891.

Application filed June 19, 1891. Serial No. 396,810. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM W. REYNOLDS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Lids or Covers for Coal-Bunkers, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to coal-bunker lids, man-hole plates, tank-covers, &c., and has for its object the provision of a novel construction whereby the lid or cover is capable of being readily applied and removed, and whereby when said lid is in place a close water-tight joint is produced; and the invention consists in the novel construction and combination of parts, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical central section of a coal-bunker ring and cover or lid embodying my invention, the lid being disconnected from the ring. Fig. 2 is a similar view with the lid in place. Fig. 3 is a plan view of the ring, the cover being removed.

A designates a flanged ring or bushing designed to be made of iron or other suitable metal, and having a horizontal flange B, which is let into a recess in the deck or floor and secured in place by bolts or screws *b b*. This ring is of a size and external form suitably adapted for use on marine vessels and is applied to the mouth of a coal-hole of a bunker as a receptacle or holder for the lid or cover C. The ring, however, may be made of various sizes, proportions, and external shape, adapting it to other uses than on board marine vessels, such as on water-tanks, man-holes of sewers or cisterns, coal-holes of street-vaults, &c. The opening through the ring is slightly tapering or flaring from its lower end toward its mouth, and in the lower portion is fitted a circular grating D, which is a necessary appendage when the ring is used upon coal-bunkers, as it constitutes a guard or safety appliance when the cover is removed. The upper portion or mouth of the ring is shelved or shouldered, as shown at *c*, for the reception and support of the circular metallic

plate C, which constitutes the lid or cover, and which is of greater diameter than the lower end of the ring-opening. The interior of the ring is contracted and beveled toward its lower end to allow of the grating being inserted through the upper end and for causing the beveled periphery of the grating to lodge and rest inside the ring near its lower end.

When it is necessary to obtain access to the coal-bunker or other receptacle to which the ring is fitted, the grating may be easily removed by being simply lifted out of the ring after the lid is removed.

For the purpose of securing the lid in place it is formed with two L-shaped lugs or hooks *d d* on its under side diametrically opposite each other, while the ring is formed with two tapering or beveled flanges or threads *e e*, separated from each other by notches *f f*, through which the lugs or hooks *d d* may be passed in fitting the lid to the ring. After inserting the lid it is secured by being turned around the distance of, say, a quarter-revolution, thus causing the lugs *d d* to pass under the beveled flanges *e e* and to impinge upon their beveled under sides, as shown in Fig. 2 of the drawings. By thus securing the lid in place it is drawn into close contact with the shelved portion of the ring and the joint rendered perfectly water-tight. If desired, a gum gasket may be placed between the lid and the ring to insure absolute tightness of the joint, an advantage which is of special importance when the ring and cover are used on odorless barrels or in other situations where it is necessary to prevent the escape of noxious gases.

G G are flattened loops or staples secured to the upper side of the lid and having recesses H H formed in the lid underneath them for the purpose of receiving the ends of hooks or other devices, by which the lid may be moved and lifted.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a circumferentially-flanged ring A, having a central opening enlarged at its upper end and shouldered at the lower termination of said enlargement, tapered or beveled from said shoulder toward its lower end, and formed or provided with

the beveled flanges or threads *e e*, of the lid or cover C, constructed and adapted to fill said enlargement and rest on said shoulder and provided with the L-shaped lugs or hooks *d d*, arranged near its periphery and projecting from its lower surface, and the grating D, located below said cover, substantially as shown and described.

2. The combination, with the ring A, having a central opening with a shelved or shouldered enlargement at its upper end and beveled flanges or threads below said enlarge-

ment, of the lid or cover C, provided with lugs or hooks *d d*, projecting from its lower surface and engaging with said flanges or threads, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of June, 1891.

WILLIAM W. REYNOLDS.

Witnesses:

WILBUR NELSON,  
GEO. W. MORRIS.