

(No Model.)

J. MURPHY.
MANHOLE FOR SHIPS' BUNKERS.

No. 535,390.

Patented Mar. 12, 1895.

Fig. 1.

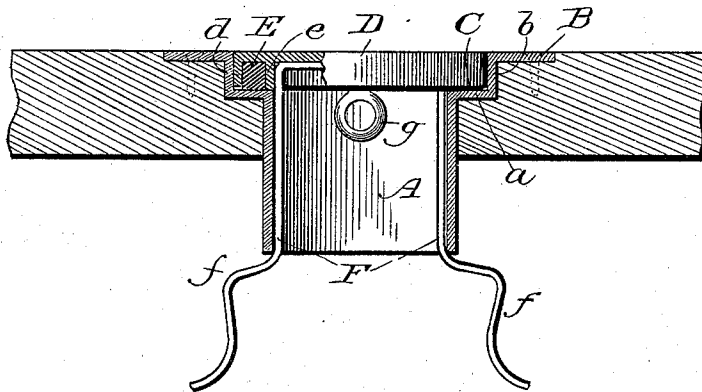


Fig. 2.

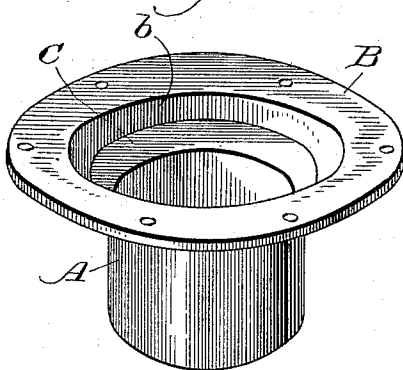
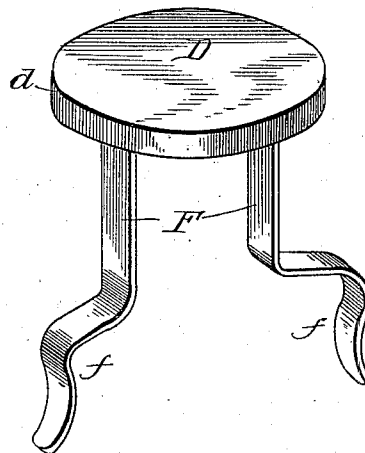


Fig. 3.



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MANHOLE FOR SHIPS' BUNKERS.

SPECIFICATION forming part of Letters Patent No. 535,390, dated March 12, 1895.

Application filed September 5, 1894. Serial No. 522,227. (No model.)

To all whom it may concern:

Be it known that I, JOHN MURPHY, a citizen of the United States, residing at Gloucester, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Manholes for Ships' Bunkers; 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.

This invention relates to closures for manholes for decks of fishing smacks and other water craft, through which coal and other articles are passed to the bunkers of said vessels.

The object of the invention is the provision of a closure which will preserve a water-tight joint and obviate any projecting portions on the deck which would present obstructions for one to stumble over. The further purpose of the invention is the provision of a closure which can be forced to place by pressure from above and which will be self-locking and capable of being opened from below by a corresponding pressure or blow.

The improvement consists of the novel features and the peculiar construction and combination of the parts which hereinafter will be more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a section of the deck of a water craft showing the application of the invention thereto. Fig. 2 is a detail perspective view of the main frame which is permanently secured to and lines the opening in the craft's deck. Fig. 3 is a detail view of the closure or cap.

Referring to the drawings, the letter A designates a band which is adapted to be fitted in an opening provided in the deck of a vessel. This band is provided at its upper end with an outwardly extending flange B which is provided at intervals with openings through which suitable fastenings pass to secure the band or frame in the opening in the deck. A seat C is provided between the band and the flange and is formed by the horizontal extension *a* and the vertical wall *b* which in-

tersects with the horizontal extension *a* and is secured thereto at the point of intersection. In applying this band or frame to the vessel's deck, the opening is enlarged at its upper end to form a countersink for the seat C, so that the outer flange B may come flush with the surface of the deck.

The closure is formed by a plate D having annular flanges *d* and *e* extending in parallel relation and located at the outer edge of the said plate. A packing E of rubber or other suitable yielding material is seated in the recess formed between the annular walls *d* and *e* and is held therein by frictional contact. This plate or cap is of a size to snugly fit within the vertical wall *b* and the packing E is of a depth to rest upon the horizontal extension *a* to form a tight joint therewith, so as to exclude water and maintain the plate D on a level with the flange B. Spring arms F are disposed at diametrically opposite points and are attached to the plate D and have their lower ends bent outward by such relative length as to run beneath the lower end of the band A and retain the cap in place when forced home in the seat C. The ends of the arms F are projected and curved outwardly to form extensions *f* which are adapted to be grasped by the hands as it is desired to engage the spring arms F from the band when it is desired to remove the cap D for such purpose. In the preferable form of construction the arms F are integrally formed and constitute parts of a single strip which is attached midway of its ends to the plate D. A ring *g* is centrally disposed on the lower side of the plate D to form means for locking the cap D in the event of the spring arms being broken or otherwise failing to answer the purpose for which they are provided.

In the application of the invention, the manhole is first provided in the vessel's deck or any other required place where it is desired to apply the invention and the same is lined by the band or frame A, which is applied thereto and secured in the manner aforesaid. When the plate or cap D is removed, coal or any suitable commodity can be loaded in the bunker of the vessel through the manhole. The cap is placed in position

and forced home by pressure from above either by stamping or otherwise forcing the same in the seat C.

Having thus described the invention, what
5 is claimed as new is—

The combination with a band or frame having an outwardly extending flange at its upper end and provided with an inner seat, of
10 a cap provided with two annular flanges on its under side between which packing is held and adapted to be fitted in the said seat and come flush with the top surface of the flange
on the band or frame and spring arms hav-

ing outwardly flaring lower ends which are adapted to engage the lower portion of the
15 frame and retain the cap in its closed position thereon, substantially as and for the purposes set forth.

In testimony whereof I have signed this specification in the presence of two subscrib-
20 ing witnesses.

JOHN MURPHY.

Witnesses:

CHAS. D. SMITH,
MARTIN J. WILLIAMS.