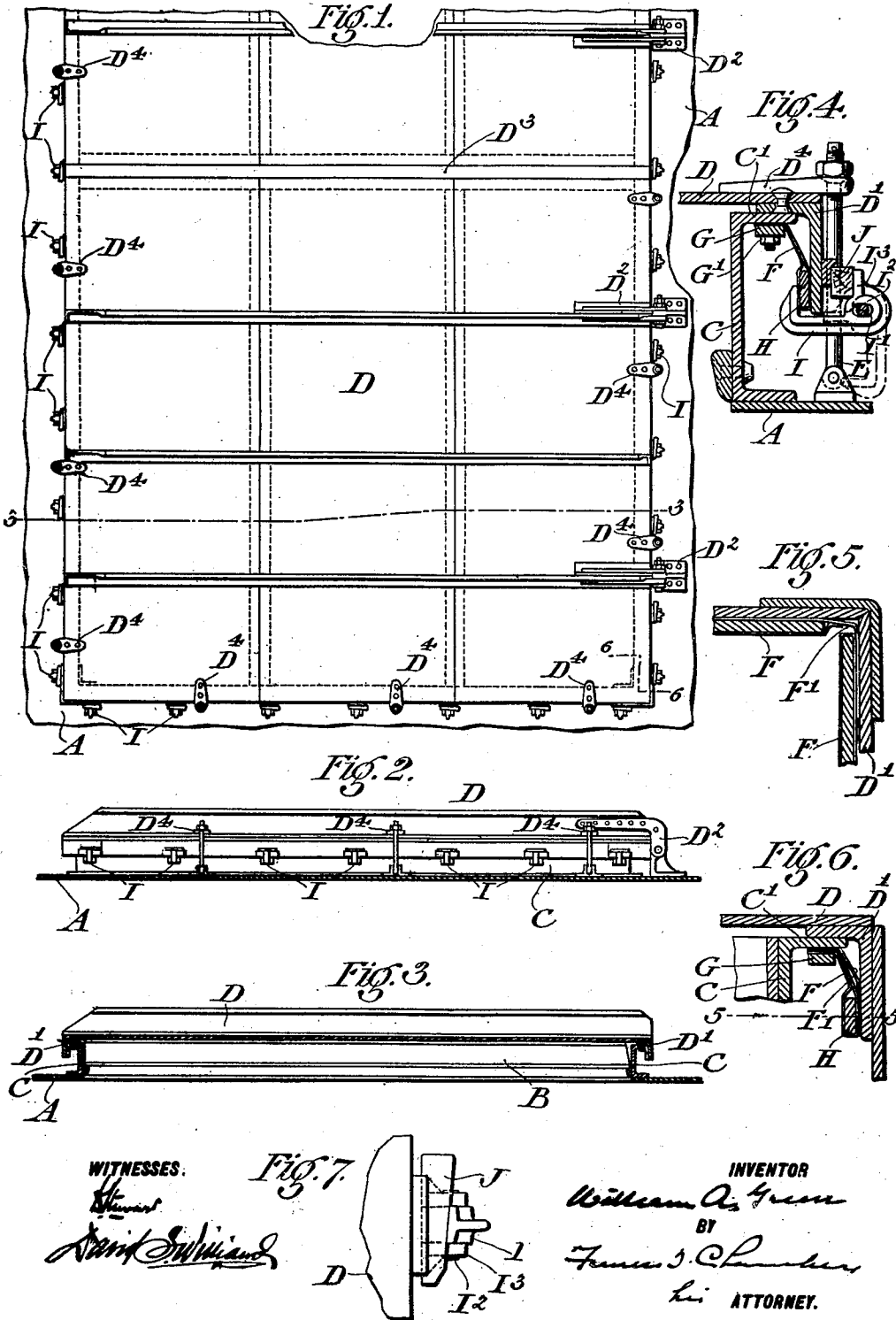


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HATCH CONSTRUCTION.
APPLICATION FILED FEB. 14, 1910.

1,005,426.

Patented Oct. 10, 1911.



UNITED STATES PATENT OFFICE.

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HATCH CONSTRUCTION.

1,005,426.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed February 14, 1910. Serial No. 543,801.

To all whom it may concern:

Be it known that I, WILLIAM A. GREEN, a citizen of the United States of America, residing in Collingswood, in the county of Camden and State of New Jersey, have invented a certain new and useful Improvement in Hatch Construction, of which the following is a true and exact description.

My present invention relates to hatch constructions, and particularly to the means employed for obtaining water tight joints between the framing of the hatchways formed in the deck of a ship, and the hatch covers therefor.

The object of the invention is to provide simple and efficient means for the purpose specified, which can be readily put into and out of service, in which the relatively fragile or easily injured parts are protected from liability to accidental injury or destruction, and inexpensively renewed and repaired when necessary.

A further object of the invention is to provide means for the purpose specified, which are independent of the manner in which the hatch covers are mounted and manipulated, and permit the covers to be hinged at the side of the hatch way, or to be bodily removed, or otherwise handled and disposed when it is desired to uncover the hatchways, and in any case do not interfere with the operation of loading or unloading the cargo through the hatchways and which are well adapted for use in connection with the large hatchways formed in the decks of large freight vessels such as handle grain, coal, ore, and the like.

The various features of novelty characterizing the present invention are pointed out with particularity in the claims annexed to and forming a part of this specification. For a better understanding of the invention, however, and the advantages possessed by it, reference may be had to the accompanying drawing and descriptive matter, in which I have illustrated and described one of the forms in which the invention may be embodied.

Of the drawings, Figure 1 is a plan view

of a portion of a hatch construction. Fig. 2 is an end elevation of the construction shown in Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1, but not showing the cover securing details. Fig. 4 is a partial section taken similarly to Fig. 3, but on a larger scale, and showing cover securing details. Fig. 5 is a partial section on the line 5—5 of Fig. 6. Fig. 6 is a partial section on the line 6—6 of Fig. 1, and, Fig. 7 is a partial sectional plan of the hatch on a larger scale than Fig. 1.

In the drawings, A represents the deck, B one of the hatch ways or deck openings, C the coaming or framework surrounding the hatchway. The coaming C may be formed of wood or metal, but in either event should preferably be provided with the out-turned flange C' at its upper edge and may advantageously be formed of channel bars as shown.

D represents the hatch cover proper which should preferably be provided with a downwardly extending flange D' at its margin. The cover D may be constructed of wood or metal and may be mounted and secured in place in any usual and suitable manner. As shown, the cover is made in sections separately connected by hinges D² to the deck at one side of the coaming. The joint at D² where adjacent sections meet may be made tight in the usual manner. In the construction illustrated tumble bolts E hinged to the deck and yoke members D⁴ secured to the hatch cover, are provided for fastening down the hatch cover.

The means employed for making a tight joint between the hatch coaming and hatch cover comprises a watershed apron F of canvas, or like flexible material, which runs along the margin of the hatchway and is permanently secured at one edge to the coaming, and the provisions for detachably securing the opposite edge of this apron to the hatch cover.

As shown, the apron F is clamped at its upper edge against the underside of the coaming flange C' by means of retaining bars G and bolts G'. Preferably, as shown,

the lower edge of the apron is stiffened by a wood or metal strip or battening bar H which may well have the canvas of the apron doubled about it, as shown in Figs. 4 and 6.

In the construction illustrated, the apron is formed in four sections one at each side of the hatch and at each corner as illustrated in Figs. 5 and 6 an extension F' of one of the two meeting apron sections is brought around the corner always overlapping the other section and is caught at the top under the retaining bar G for the other section. This insures in a simple manner a fairly good joint at the corner while allowing all necessary freedom of movement of the lower edge of each apron section toward and away from the corresponding side of the hatch coaming.

An efficient means for detachably securing the lower edge of the canvas to the margin of the hatch cover is formed by the clamps I, though the invention, broadly considered, is not limited to the use of any particular form of clamping means. As shown, the clamping devices I are in the form of yokes, each having a slotted opening I' for the pintle I² carried by a corresponding bracket I³ secured to the outer side of the cover flange D'. When these devices are employed, the lower edge of the apron is secured in place by swinging each yoke from the dotted line position shown in Fig. 4 into the full line position of that figure, and driving a wedge J between the outer leg of each clamping yoke and the adjacent side of the cover flange D'.

With the construction illustrated, when the hatch is uncovered the apron hangs down from the outer edges of the bars G, and because of the narrow width of the apron and the fact that the coaming flange C' forms an efficient guard, for it, the apron, is out of the way and practically free from liability of injury by objects resting or moving about on the deck. Moreover, the canvas may be readily replaced or repaired when necessary. The apron is very effectively protected from injury by objects on the deck when the cover is in place and does not interfere with the opening of the hatch or the entire removal of the cover or with the loading or unloading of the cargo. As compared with tarpaulin sheets covering the entire hatch cover and battened down at the margins of the cover as heretofore commonly used, the present invention insures better joints, requires less canvas, and the latter is less subjected to wear and is always at hand when the hatch cover is to be battened down. The permanent attachment of the apron of the battening bars H greatly facilitates the quick formation of tight joints with relatively simple clamping devices.

While in accordance with the provisions of the statutes I have herein described and illustrated the best form of my invention now known to me, it will be apparent to those skilled in the art that many changes may be made in the form of the apparatus disclosed without departing from the spirit of my invention, and I do not wish the claims hereinafter made to be limited to the particular apparatus or mode of use disclosed herein more than is made necessary by the state of the art.

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

1. In a hatch, the combination with the coaming of a hatch cover having a depending flange surrounding and extending below the top of the coaming when the hatch cover is in a closed position, a flexible apron adapted to form a watershed permanently secured to the coaming at its upper edge and tending to hang parallel to said depending flange, and means for detachably clamping the lower edge of the apron to the hatch cover flange.

2. In a hatch, the combination with the hatch coaming formed with an outturned flange adjacent its upper edge, of a hatch cover, a flexible water shed apron permanently secured at one edge to and depending from said coaming beneath said flange, and means for detachably clamping the opposite edge of the apron against the hatch cover.

3. In a hatch, the combination with the hatch coaming formed with an outturned flange adjacent its upper edge, of a hatch cover formed with a depending flange at its margin surrounding the coaming flanges, a flexible watershed apron permanently secured against and depending from the underside of said coaming flange, and means for detachably clamping the lower edge of the apron against the cover flange.

4. In a hatch, the combination with the coaming having an outturned flange adjacent its upper edge, of a hatch cover having a downwardly extending flange at its margin surrounding the coaming flange, a flexible watershed apron permanently secured to and depending from the underside of said coaming flange, and means for detachably clamping the apron against the innerside of said cover flange.

5. In a hatch cover, the combination with the coaming having an outturned flange adjacent its upper edge, of a hatch cover having a downwardly extending flange at its margin surrounding the coaming flange, a flexible watershed apron permanently secured to and depending from the underside of said coaming flange, and clamping devices secured to the cover for detachably clamping the apron against the cover.

6. In a hatch, the combination with the hatch coaming and the hatch cover, of a flexible watershed apron permanently secured at one edge to said coaming, and batten-
5 tening bars permanently secured to the opposite edge of the apron at each side of the hatch, and means for detachably clamping

said battening bars and the apron to said cover.

WM. ARTHUR GREEN.

Witnesses:

ARNOLD KATZ,
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