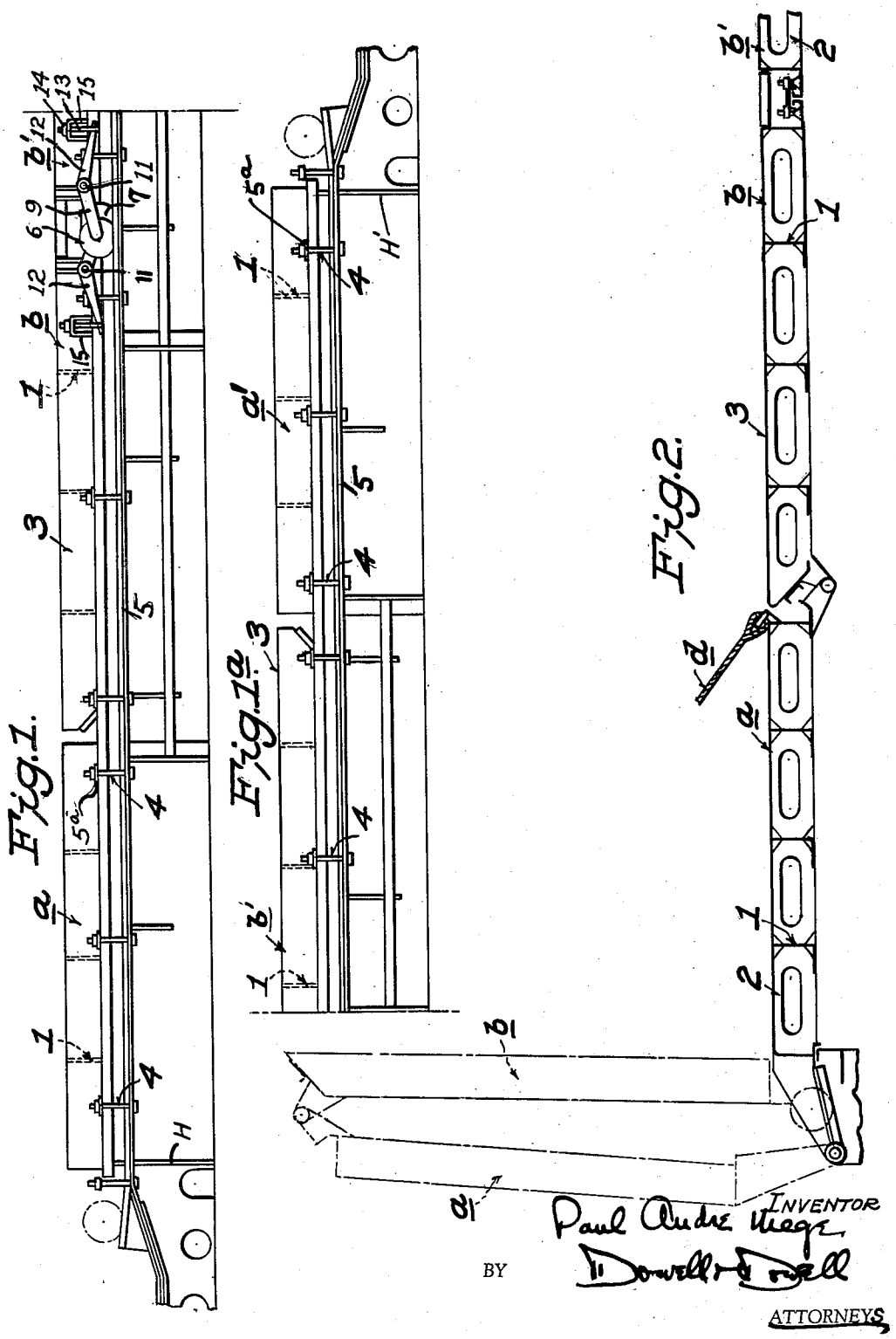
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METALLIC COVER FOR CLOSING THE HATCHWAYS OF SHIPS

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METALLIC COVER FOR CLOSING THE HATCHWAYS OF SHIPS

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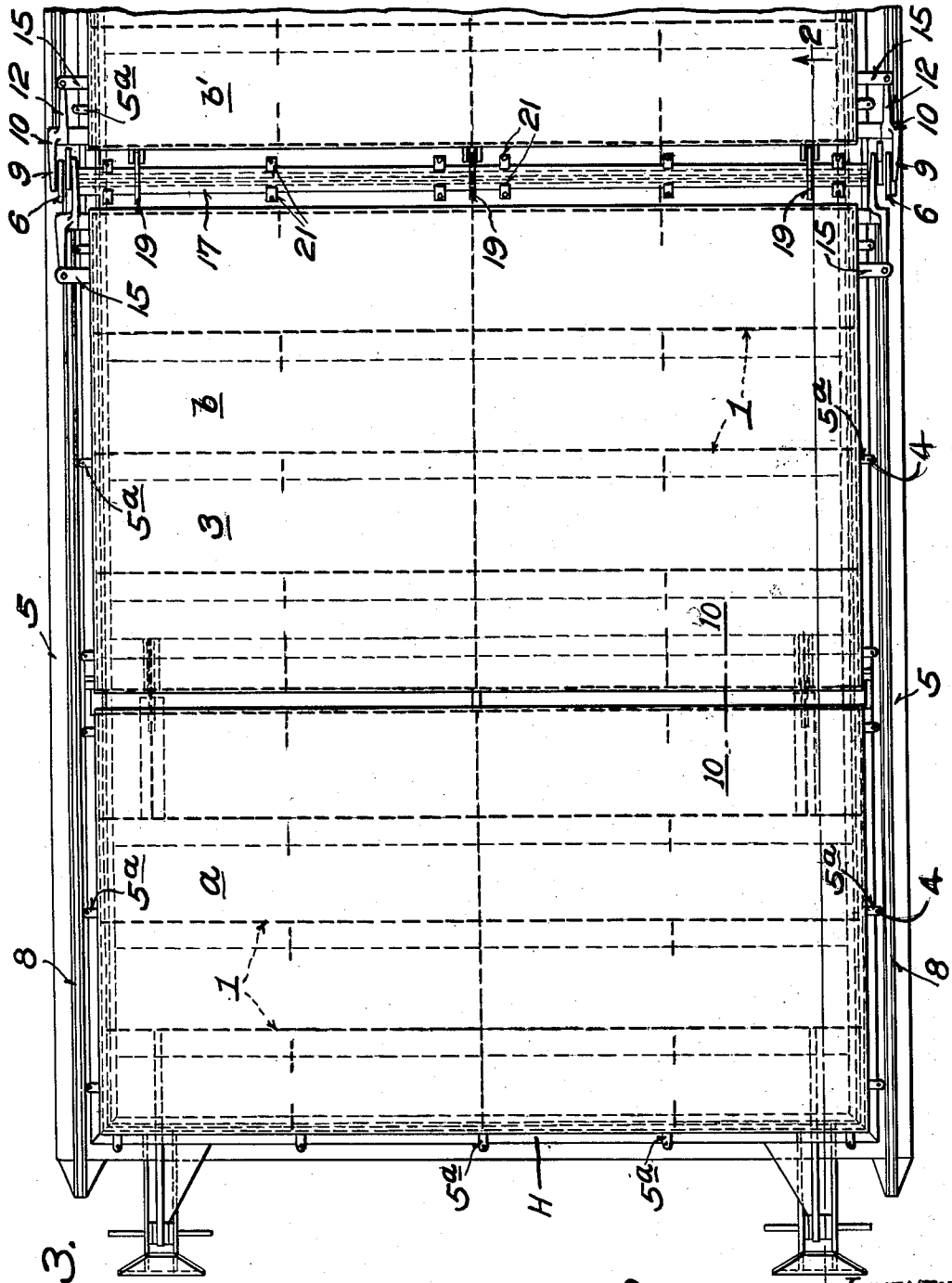


Fig. 3.

BY

INVENTOR
Paul Andre Mege
Donald & Donald
ATTORNEYS

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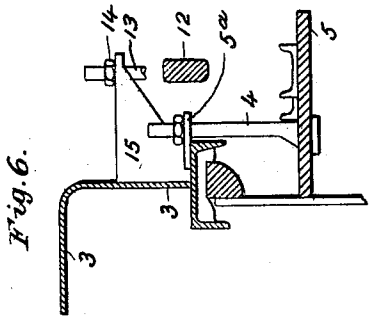


Fig. 6.

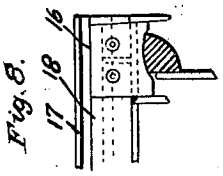


Fig. 8.

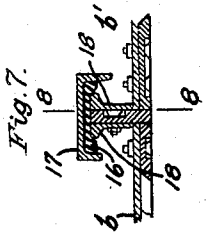


Fig. 7.

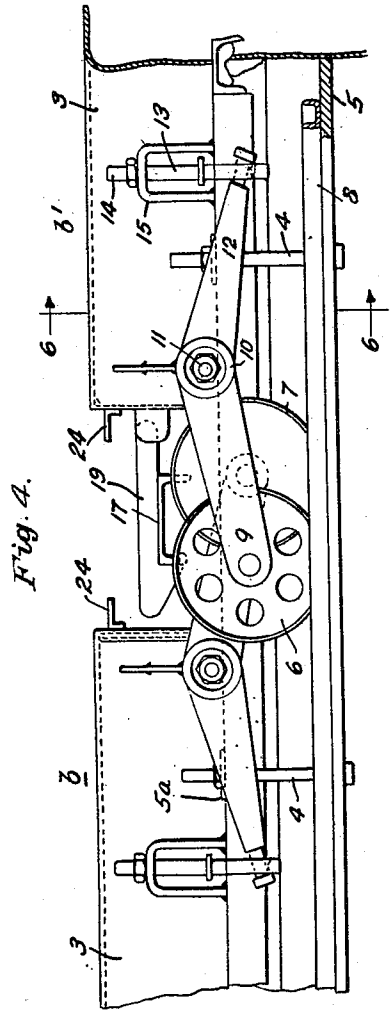


Fig. 4.

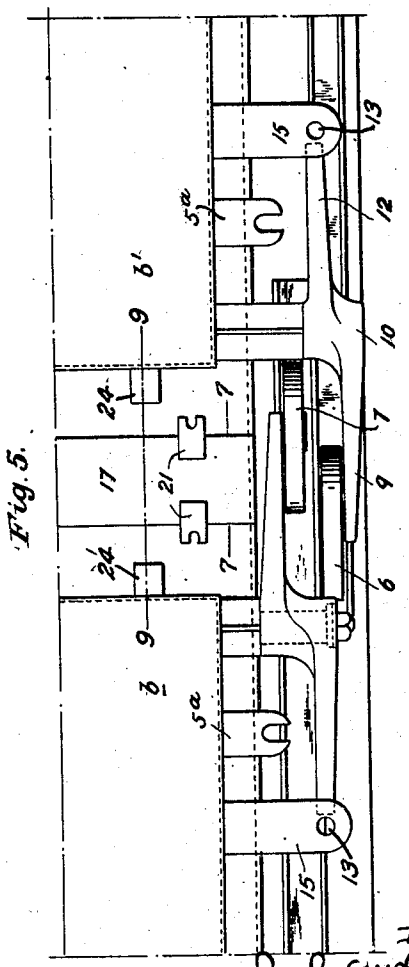


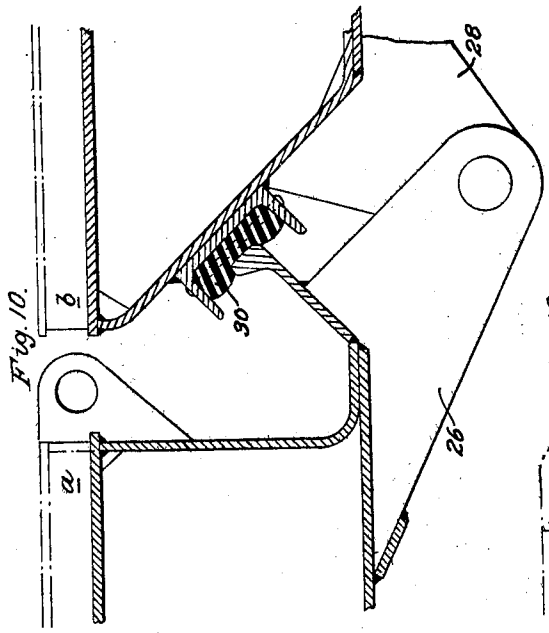
Fig. 5.

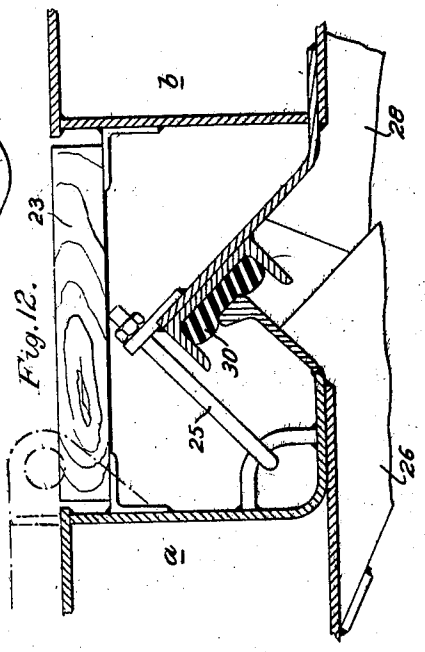
INVENTOR:
Paul Cuclie Mege
By Dowell & Dowell
ATTORNEYS

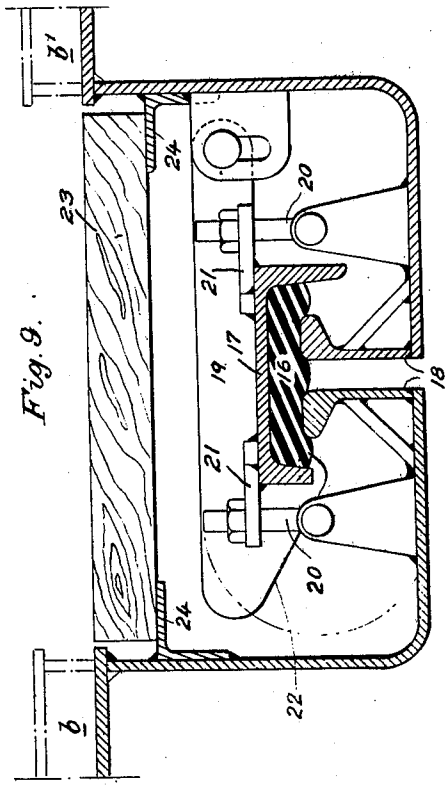
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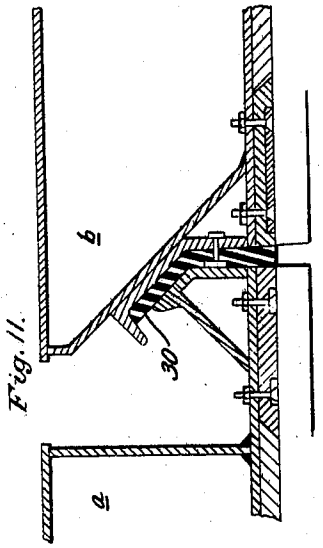
METALLIC COVER FOR CLOSING THE HATCHWAYS OF SHIPS

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INVENTOR:
Paul Andre Mege
By Dowell & Dowell
ATTORNEYS

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METALLIC COVER FOR CLOSING THE HATCHWAYS OF SHIPS

Paul André Mege, Poissy, France

Application July 22, 1946, Serial No. 685,358
In France July 20, 1945

2 Claims. (Cl. 114—203)

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This invention relates to hatch covers of the kind in which metal sections are hinged together and to the coaming so that they are folded and unfolded in opening and closing the hatch. In particular it relates to hatch covers as described in the specification of British specification No. 466,019 (complete accepted May 14, 1937) wherein cover sections, of which one is hinged to the hatch coaming, are raised and folded together by a lifting effort applied at the hinges connecting one section to the other, the two sections thereafter being held erect at one end of the hatch.

Heretofore means of the kind referred to have not been in all respects so satisfactory as is desired, there being too many external obstructions militating against convenience and safety.

To minimise such disadvantages is the general object of the present invention which provides an improved construction wherein fastenings and other fittings do not for the most part extend above the top surface of the cover when the hatch is closed, the result being that then the cover may be regarded as presenting a practically even and safe external surface. The disposition of the parts furthermore facilitates opening and closing movements of the cover sections by cargo winches as is usually done, the operation taking place automatically while the fastening down means are undone.

In the accompanying drawings, Fig. 1 is a longitudinal skeleton elevation serving as a key to the external appearance of approximately one half of a hatch cover according to the invention, and Fig. 1*a* is a similar skeleton elevation of the other half of the hatch cover, said Figs. 1, 1*a*, showing the complete hatch cover. Fig. 2 is a corresponding longitudinal sectional view on the line 2—2, Fig. 3. Fig. 3 is a top plan view of the approximate half of the hatch cover shown in Fig. 1. Fig. 4 is a view on a larger scale of the means, disposed centrally of the hatch, that serves to connect a pair of cover sections at one end of the hatchway to the companion pair of cover sections at the opposite end of the hatchway, as well as the wheel system employed to assist movement of the cover sections. Fig. 5 is a plan view of Fig. 4. Fig. 6 is a section on the line 6—6 of Fig. 4. Fig. 7 is a section on the line 7—7 of Fig. 5 and Fig. 8 is a section on the line 8—8 of Fig. 6. Fig. 9 is an enlarged section on the line 9—9 of Fig. 5. Fig. 10. is a longitudinal sectional view taken on the line 10—10 of Fig. 3. Fig. 11 is another sectional view similar to Fig. 10 taken near the same point. Fig. 12 is a view similar to Fig. 11 showing a modification.

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As shown in Figs. 1, 1*a*, 2 and 3, *a* and *b* are the two cover sections at one end of the hatch which are hinged together, the section *a* being in turn hinged to the hatch coaming H. a^1, b^1 represents part of a companion pair of cover sections hinged together and to the hatch coaming H′ at the other end in a manner equivalent to the cover sections *a* and *b* it being understood that when closed the sections *b* and b^1 are equipped to come together to form a tight joint as shown in Fig. 1. 6, 7 (Figs. 4 and 5) represent the wheels with which the sections *b*, b^1 are provided. *d* (Fig. 2) represents the rope through which a pull is applied to the cover sections at the hinge between them. When the hatch is open both sections *a*, *b*, and a^1, b^1 are folded at the ends of the hatch, the sections *b* and b^1 being vertical and clear of the hatchway while sections *a* and a^1 have a slight inclination towards the hatch, as indicated in dot and dash lines in Fig. 2.

According to the invention each cover section *a*, *b*, a^1, b^1 is constructed caisson fashion, that is to say closed at the top and open below, being built up of transverse reinforcing plates such as 1 and longitudinals such as 2 (Fig. 2) the whole being clothed with external metal sheeting 3. These plates and sheeting are welded together, thereby reducing the weight of the covers compared with riveting as heretofore. The fixing bolts 4 which pass through the deck plate 5 (Fig. 6) engage slotted lugs 5ª attached to the vertical walls of the covers and do not extend beyond the plane of the top surface of the covers.

Referring now more particularly to Figs. 4 and 5, 6 represents the wheel at one side of the cover section b^1 and 7 the equivalent wheel at the same side of the cover section *b*, it being understood that these wheels are duplicated at the opposite side of these cover sections. Considering the wheel 6, which runs in a channel iron track 8 (Fig. 4), said wheel is pivoted to the arm 9 of a lever 10 which is pivoted at 11 to the cover section b^1, the other arm 12 of the lever being engaged by the eye of a bolt 13 adapted to be raised and lowered under the control of a nut 14 (Fig. 4) bearing on a stirrup bracket 15 attached to the section b^1. By this means the cover section b^1 is held clear of the coaming while being raised and lowered. The wheel 7 with its companion at the opposite side of section *b* constitute a pair, which being equipped and controlled in the same way as the wheel 6 already described, control the section *b*.

The jointing means between the sections *b*, b^1 is shown more clearly in Figs. 5 and 9 and com-

prises as elements a gasket **16** (Fig. 4) located in a channel iron **17**, the gasket being adapted to bear on two bulb irons **18** which are respectively the ends of sections *b* and b^1. Arms **19** welded to the top of the channel iron **17** are pivoted to the section b^1 whereby the channel iron can be moved in the act of uncovering the hatch. When the hatch is closed the channel iron **17** is held tight upon the bulb irons **18** by bolts **20** (Fig. 9) engaging slotted lugs **21** welded to the channel iron **17**. To open the hatch the left hand bolt **20** (Fig. 9) is loosened and turned down as indicated by the dot and dash line in Fig. 9 whereupon the section b^1 can be withdrawn, the channel iron **17** being borne by the arms **19** which remain held in position each by its pivot and right hand bolt **20** (Fig. 9). The arms **19** are each formed somewhat as shown in Fig. 9 that is to say with a curved nose **22**, this shape ensuring that when the section b^1 commences to recede during opening movement the nose will ride over the adjacent bulb iron **18**. Conversely as the section b^1 returns during closing movement, the opposite inclined edge of the nose will ride against this bulb iron and thus complete the joint automatically. It only remains then to fasten the joint by screwing down the bolts **20**. The jointing means it will be seen occupies a space between the sections *b* and b^1 well below the top level of the cover and the general smooth external surface aimed at is maintained by fitting a removable filling member **23** (Fig. 9) which may be of wood resting on brackets **24** and held in any suitable manner.

The jointing means between sections *a* and *b* of a pair may be either of the form shown in Figs. 10, 11 or Fig. 12, the latter being a modification particularly applicable in the case of very wide hatchways. In these cases again, the disposition of the hinge parts **26**, **28** is such that there is no projection between the level of the top surface of the cover and the gap between the section ends may be bridged by a removable filling member **23** as is the gap between the abutting end sections *b* and b^1. The arrangement of Fig. 12 differs from the arrangement of Fig. 11 primarily by the use of a bolt **25** or bolts anchored to the section *a* and adapted to exert additional pressure upon the packing **30**.

The mode of obtaining tightness between the coaming and covers is substantially well known and is shown in Figs. 6, 7, 8 and 11.

What I claim is:

1. In combination with a hatch coaming, a pair of covers therefor hingedly connected respectively to opposite ends of the coaming and adapted to meet at their abutting ends when the covers are in closed position, each cover comprising, respectively, inner and outer hinged sections constructed panel fashion, each section comprising transverse reinforcing plates and longitudinals with external sheet metal plating disposed on said longitudinals and transverse plates all welded together and presenting a practically smooth external surface; securing elements between the inner sections of the covers disposed below the top surface of the plating; the inner sections of the covers being adapted to be advanced towards each other and separated, and said elements including watertight jointing means having opposed elements fixed on the said inner sections; cam means carried by one of said sections adapted to guide the jointing means into operative association or to separate same respectively in the act of bringing the sections together or separating them, the said means being disposed in a space between the cover sections; and a removable member closing said space and forming a continuation of the top surface of the plating.

2. In combination with a hatch coaming, a pair of covers therefor hingedly connected respectively to opposite ends of the coaming and adapted to meet at their abutting ends when the covers are in closed position, each cover comprising, respectively, inner and outer hinged sections constructed panel fashion, each section comprising transverse reinforcing plates and longitudinals with external sheet metal plating disposed on said longitudinals and transverse plates all welded together and presenting a practically smooth external surface; securing elements between the inner sections of the covers disposed below the top surface of the plating, the inner section of the covers being adapted to be advanced towards each other and separated, said securing elements comprising a pair of opposed elements fixed on the inner ends of said inner sections and a cam element fixed to one section and bridging said opposed elements when the sections are in closed position; and said cam element carrying a sealing element cooperating with said opposed elements to bring the sealing element into abutting engagement with said opposed elements when the covers are advanced towards each other and to separate the sealing elements from said opposed elements when the covers are separated.

PAUL ANDRÉ MEGE.

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