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SHIP'S HATCH

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Fig. 1.

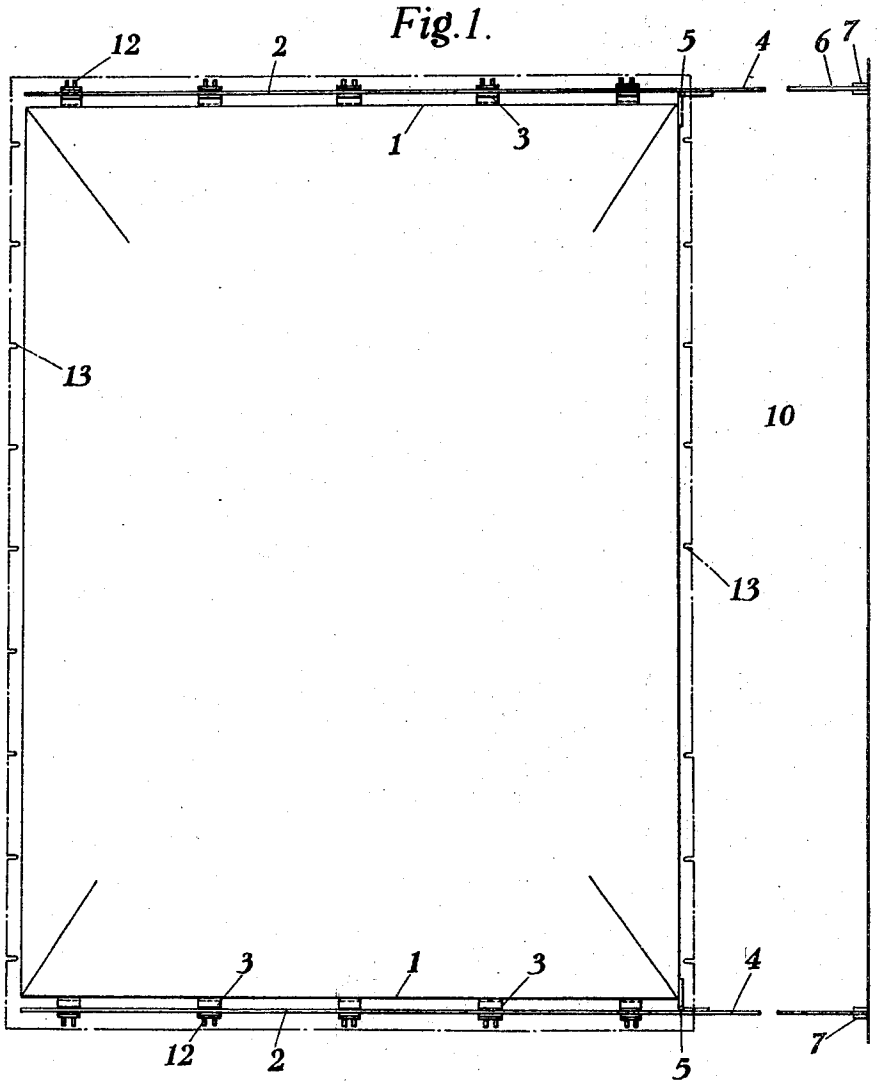
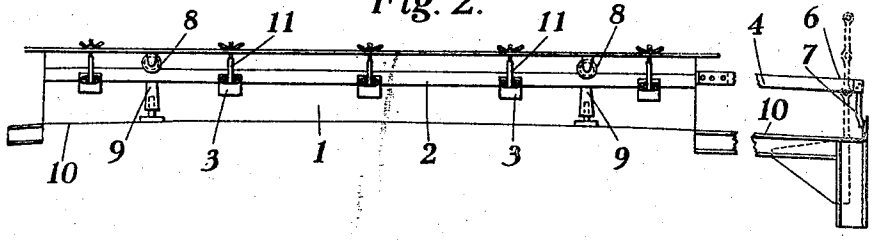


Fig. 2.



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SHIP'S HATCH

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Fig. 3.

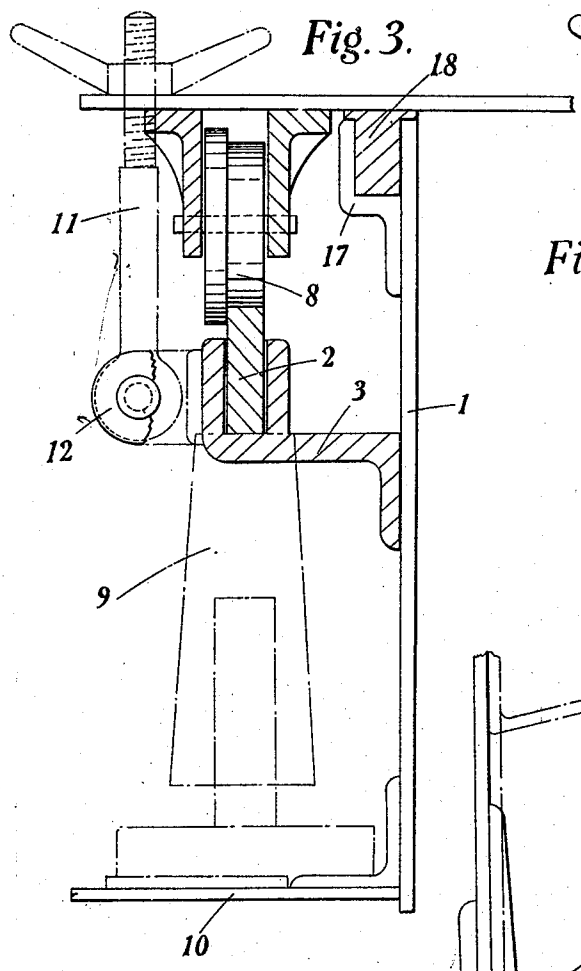


Fig. 4.

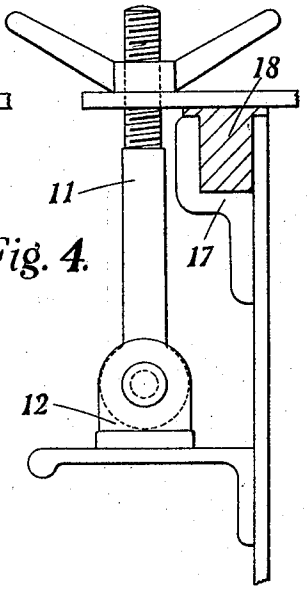


Fig. 5

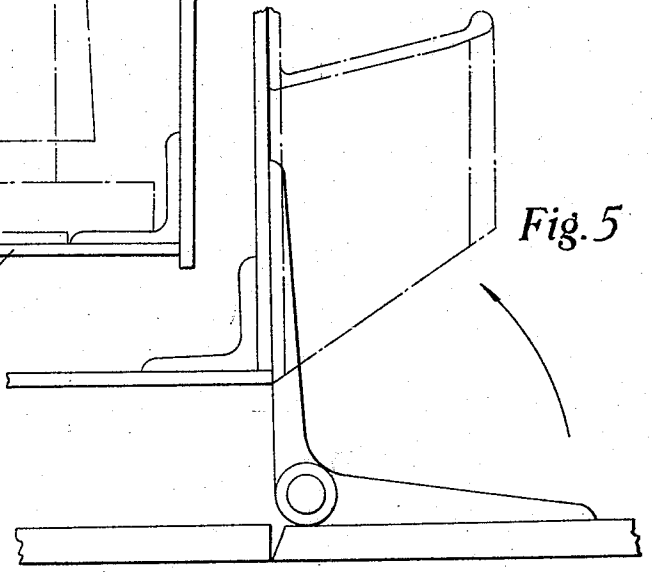
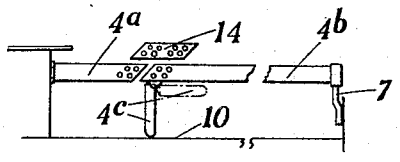


Fig. 8.



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Fig. 6.

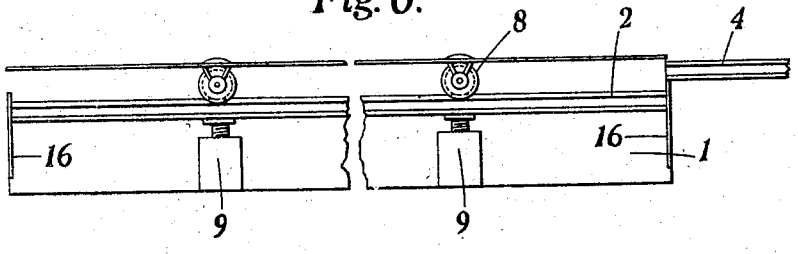
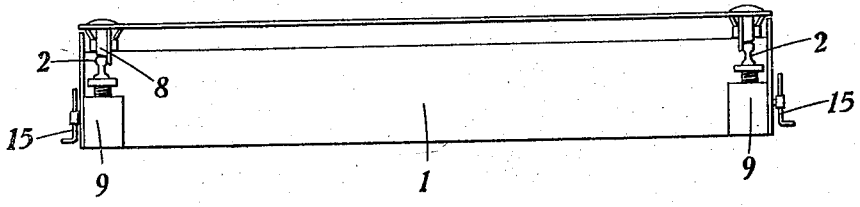


Fig. 7.



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Patented Sept. 13, 1932

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UNITED STATES PATENT OFFICE

EDWARD PERKINS, OF RHODES, ÆGEAN SEA

SHIP'S HATCH

Application filed March 10, 1932, Serial No. 598,017, and in Great Britain March 12, 1931.

This invention relates to ships' hatches wherein a hatch cover is transportable on rollers along rails on the deck, and has for its chief object to provide an improved construction of such hatches.

According to the present invention the means for covering and uncovering the hatchway comprises movable rails extending alongside two parallel walls of the hatch coaming for substantially the whole length thereof, continuation rails across the deck, means for raising said movable rails into alignment with the continuation rails, and means such as wheels on the hatch cover to support the latter transportably on the rails substantially as described.

Any convenient means may be provided for raising and lowering the rails with the hatch cover. The rails may for example be supported at or near their ends upon lifting jacks or screws or equivalent lifting means. Such means may be secured just inside or just outside the hatch coaming and be adapted to be operated by removable crank handles or turn keys or the like.

The continuation rails may be removable so that when not in use they will not obstruct the deck space.

Between the hatch cover and the rim of the hatch coaming any suitable form of gasket may be provided and clamping means may also be employed if necessary to hold down the cover positively on the rim of the coaming.

The hatch cover may be made of steel in sections or in one strong piece but it will be understood that as it is easily transportable as above described there is no necessity from considerations of weight to make it in sections.

In order that the invention may be clearly understood and readily carried into effect the same will now be described with reference to the accompanying drawings in which:—

Figure 1 is a plan view of a ship's hatchway and adjacent deck, the hatch cover being shown only in dot-and-dash lines to expose the rails situated according to the present invention close alongside the two ends of the hatch coaming for alignment with continuation rails extending laterally from the right hand side of the hatch coaming to the right hand side of the ship.

Figure 2 is an elevation corresponding to Figure 1 but showing the hatch cover in full lines and in place on the coaming.

Figure 3 is an enlarged sectional elevation of an edge portion of the hatch cover, a flanged wheel, the rail and associated parts.

Figure 4 is a sectional elevation of the means for tightening down the hatch cover onto the top of the hatch coaming along the right and left hand sides of the coaming.

Figure 5 is an enlarged and fragmentary plan view of the rear right hand corner of the hatchway and the adjacent portions of the rails.

Figures 6 and 7 are internal views at right angles to one another of a hatchway provided with means internally for raising and transporting the cover in accordance with the present invention.

Figure 8 is a view of a modification of the continuation rail as hereinafter described.

Referring first to Figures 1 to 5 it is seen that alongside each of the two ends 1 of the hatch coaming and extending substantially the whole length thereof a rail 2 rests on chairs or brackets 3 secured to the external face of the coaming. In continuation of each hatch rail 2 is a rail 4 extending across the deck and pivoted at one end 5 to a corner of the coaming and supported at its outboard end 6 in a socket 7. Each continuation rail 4 can be swung on its pivot to lie alongside the hatch coaming when not in use.

Beneath the hatch cover are mounted flanged wheels 8 normally engaging with the hatch rails 2, and beneath the ends of the hatch rails 2 are lifting jacks 9 resting upon the deck 10.

The hatch is normally held down against the edges of the hatch coaming by means of holding down bolts or toggles 11. These bolts or toggles are conveniently pivoted in lugs 12 and the edges of the hatch cover are recessed or gapped as at 13 to allow them to be swung into and out of position.

When it is desired to remove the hatch cover the continuation rails 4 are swung out-

wards and their free ends are secured in the sockets 7. The side and end toggles 11 are all slackened and swung down clear of the hatch cover and the lifting jacks 9 are then operated to raise the rails 2 and hence also the cover until the rails 2 are level with the rails 4. It may be noted here that the hatch cover thus raised but not transported gives effective ventilation at the hatchway while nevertheless remaining protective. To uncover the hatchway the cover is now merely thrust aside and travels on its wheels along the hatch rails 2 and continuation rails 4 as far as desired.

In the case of a hatchway no broader than the side spaces on the deck the cover may be made in one piece, but in the case of large hatchways, or in cases where the side spaces are narrower than the hatch width the cover may be made in sections or be allowed to overhang the edge of the ship to a limited extent.

In any event it is desirable to have a certain amount of free gangway alongside the hatch when the cover is off as well as when it is on, and in cases where the hatch cover or sectional part thereof is less in width than the side spaces on the deck, the continuation rail may advantageously be made of two pieces 4^a and 4^b as shown in Figure 8 so that when the cover has been traversed on to the rail piece 4^b, the joint plate 14 may be removed and the rail piece 4^a be swung into position alongside the coaming. When the rail piece 4^b is so used a hinged leg 4^c is previously let down to support its free end as shown in Figure 8.

In the modification shown in Figures 6 and 7 the lifting jacks 9 are located on the internal faces of the hatch coaming and are operable from the outside of the coaming by removable or collapsible keys or handles 15, the inlet holes for which may be plugged or covered in any suitable watertight manner. The ends of the rails 2 may be steadied in guides 16.

In order to secure watertightness between the cover and the edge of the hatch coaming the latter may be provided with a channel 17 in which is packed greasy hemp packing 18.

What I claim is:—

1. Means for covering and uncovering hatchways comprising movable rails extending alongside two parallel walls of the hatch coaming for substantially the whole length thereof, continuation rails across the deck, means for raising said movable rails into alignment with the continuation rails, and anti-friction bearing members on the hatch cover to support the latter transportably on the rails.

2. Means according to claim 1 the continuation rails being pivoted so as to be swingable alongside the hatch coaming when not in use.

3. Means according to claim 1 the bearing members on the hatch cover being in the form of wheels carried on the underside of overhanging marginal portions of the hatch cover.

4. Means according to claim 1 each continuation rail being separable into sections.

5. Means according to claim 1, the means for raising the movable rails being situated within the hatch coaming and operable from the outside of the coaming.

In testimony whereof I have signed my name to this specification.

EDWARD PERKINS.