Aug. 17, 1965 E. H. ISAKSSON 3,200,785

LATCHING DEVICE FOR HATCH COVERS OR THE LIKE

Filed Sept. 8, 1964

2 Sheets-Sheet 1

FIG. 1

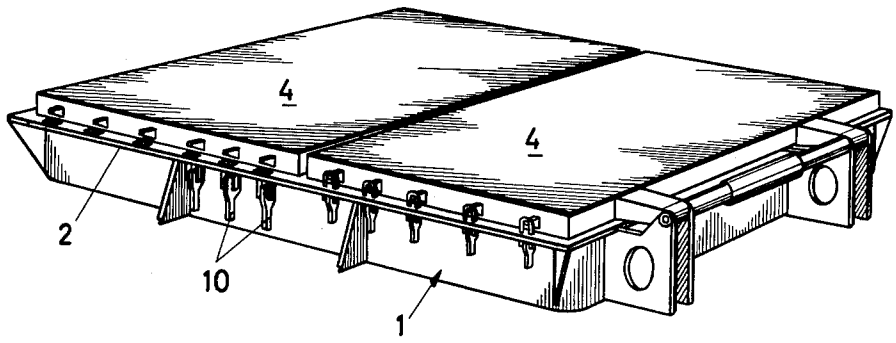
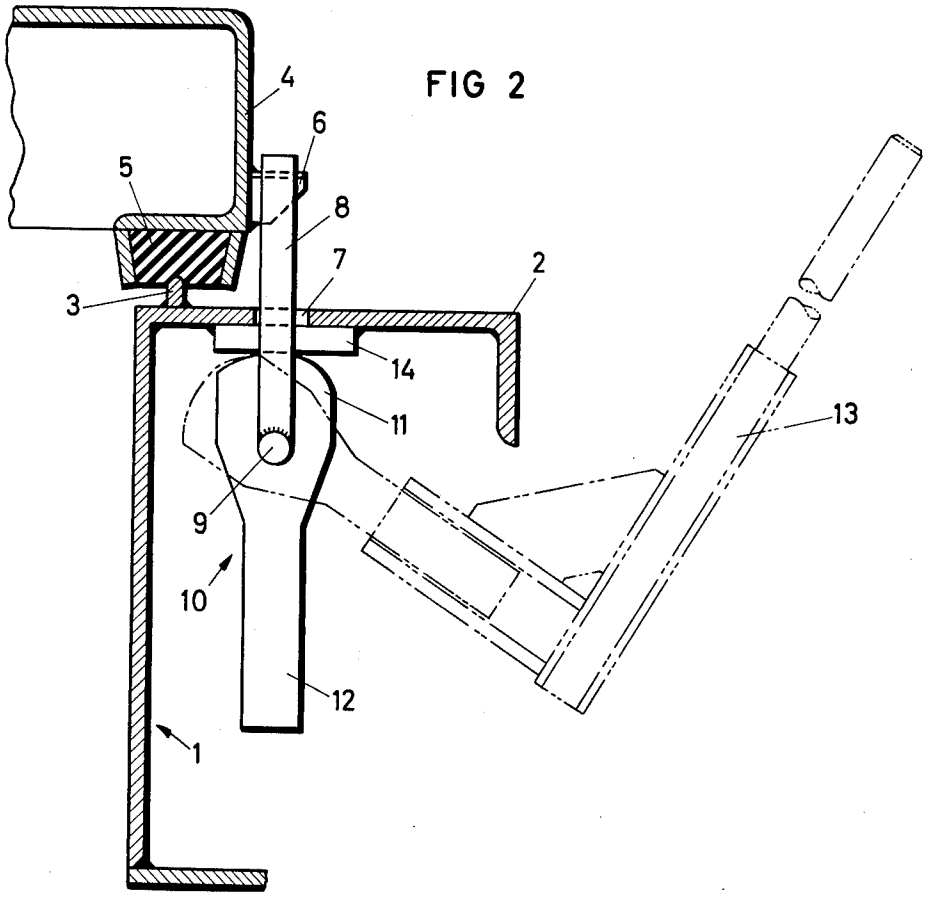


FIG 2



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FIG. 3

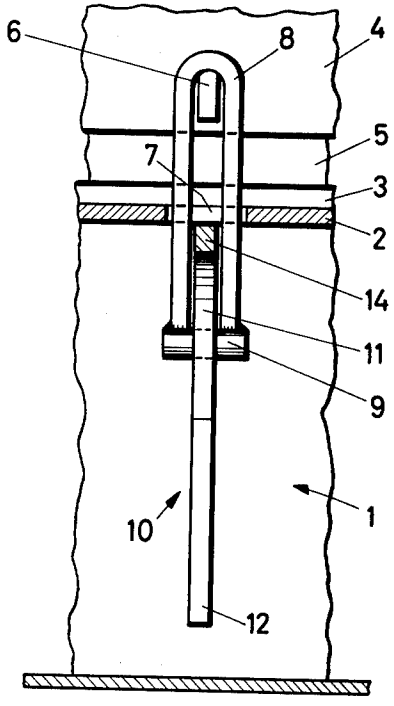
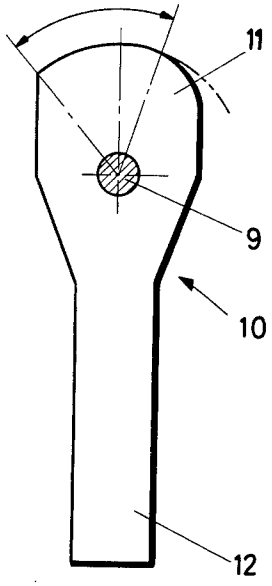


FIG. 4



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LATCHING DEVICE FOR HATCH COVERS OR THE LIKE

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Claims priority, application Sweden, Oct. 10, 1963, 11,107/63
2 Claims. (Cl. 114—203)

Different types of latching devices for hatch covers or similar closure means have been proposed, which contain parts cooperating through screw-, wedge- or eccentric action. A common disadvantage with many of these devices is that they consist of separable parts, which are connected in locking position only. These devices are costly to manufacture and difficult to utilize, and as they usually are detachably connected to the coaming or the cover, respectively, they are easily lost when the cover is open. Another disadvantage is the corroding influence of the weather, especially on such devices which include a screw and nut member.

One object of the invention is to obtain a latching device which includes a complete fitting unit for each point where locking is desired and which is designed to be permanently secured to the coaming.

Another object of the invention is to obtain a latching device where accidental opening of the fitting due to actions uncalled for are unlikely to occur.

A further object of the invention is to obtain a fitting which is cheap to manufacture and easy to operate.

In the drawings:

FIGURE 1 shows a perspective view of a hatch cover.

FIGURE 2 shows a section adjacent a latching device through the coaming with the cover in closed position.

FIGURE 3 shows the same details, as seen from the outside of the coaming.

FIGURE 4 shows part of a lever on a larger scale.

In the drawing 1 denotes the coaming which at its top part is strengthened by means of an angle bar 2 forming a horizontal flange running along at least two sides of the coaming. This carries a rib 3 adapted to cooperate with a resilient packing 5 arranged on the underside of the cover 4. The cover consists of two hingedly connected sections one of which in the usual manner being swingably mounted on hinges mounted outside the coaming. The sections may be opened and closed in any arbitrary manner for instance by a tackle connected to a winch or by some kind of hydraulic apparatus. Studs or hooks 6 are arranged at the edges of the cover at some distance from each other, in such a manner that a hook or stud, when the cover is closed, will be located directly above an opening 7 in the flange 2. In each opening there is arranged a fitting, which consists of a main member shaped as an inverted U. When the cover is in closed position, this member may be brought to cooperate with a stud 6. A rod 9 is fixed between the "open" ends of the U-member so as to form a pivot for a two armed lever 10, which thus becomes swingably mounted between the shanks of the U-member. One arm 11 of the lever is shaped as an eccentric disc with a top part designed as a circular arc with its centre in the rod 9. The top part extends to both sides of an elongation of longitudinal axis of the handle and merges to one side of the disc into an arc with smaller radius. The pressure is thus obtained by a downwards movement while the lever is at an angle to the coaming. The lever may finally be brought to or even somewhat beyond the vertical position, where it is out of the way, without the pressure being unduly increased. The other arm 12 of the lever is designed as a handle to fit a tool 13, which acts as an elongation of the lever arm.

In order permanently to retain the fitting with the coaming a locking bar 14 is utilized. When the fitting has been placed in the opening this bar is inserted between the shanks of the U-member and is then attached to the lower side of the flange. The lower surface of this bar will act as a counterpart for the eccentric disc 11. When the fitting is not used the bottom part of the U-member will reset upon the locking bar where the fitting forms no hindrance during loading and unloading. When the cover shall be latched down the lever arm 12 is brought to a horizontal position and lifted. Hereby that part of the eccentric disc which has the shortest radius will be brought into contact with the locking bar 14. U-member 8 can now be lifted to its highest position and brought into contact with stud 6. The lever is thereafter forced downwards in such a manner that the eccentric may force the sealing strip against rib 3 and be retained in this position. The fitting remains in a vertical position due to the weight of lever 12. Even if the cover is temporarily depressed by waves breaking over a ship so that the packing is compressed beyond the initially decided value the fitting always regains its grip. As the handle is movable at right angles to the coaming no movement of goods along the coaming will tend to accidentally loosen the grip of any fitting. In order to avoid a weaking of the flange the openings are made sufficiently large to just permit the movements of the fitting.

What I claim is:

1. In a latching device for a hatch cover comprising a coaming surrounding a hatch opening, a cover adapted to rest on said coaming when in closed position and a number of fitting for securing said cover to said coaming

an outwardly directed horizontal flange at at least two sides of the coaming and a number of openings in said flange

a number of studs on the edges of the cover, each stud located in a position to match a flange opening when the cover is in closed position

a fitting in each flange opening consisting of a main member shaped as an inverted U and adapted for cooperation with a stud

a lever consisting of an eccentric disc and a handle pivotally mounted between the ends of the shanks of the U-member

and a locking bar fitted between the shanks intermediate the lever and the bottom of the U-member and attached to the lower side of the flange for cooperation with said eccentric disc.

2. A latching device according to claim 1 in which the eccentric disc has a top part defined by a circular arc with its centre in the pivot of the lever said top part extending to both sides of an extension of the longitudinal axis of the handle.

References Cited by the Examiner

FOREIGN PATENTS

722,440 1/55 Great Britain.

MILTON BUCHLER, *Primary Examiner.*