Aug. 7, 1962 O. GRÜNDSETH 3,048,183

RAIN OR WEATHER COVER FOR SHIP'S HATCHES, OPEN RAILWAY TRUCK AND THE LIKE

Filed May 20, 1959

FIG. 1.

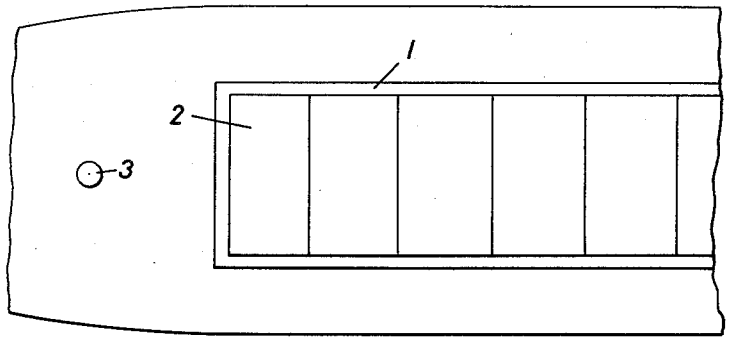


FIG. 2.

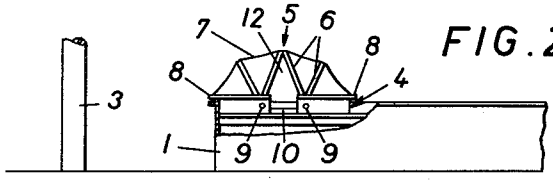
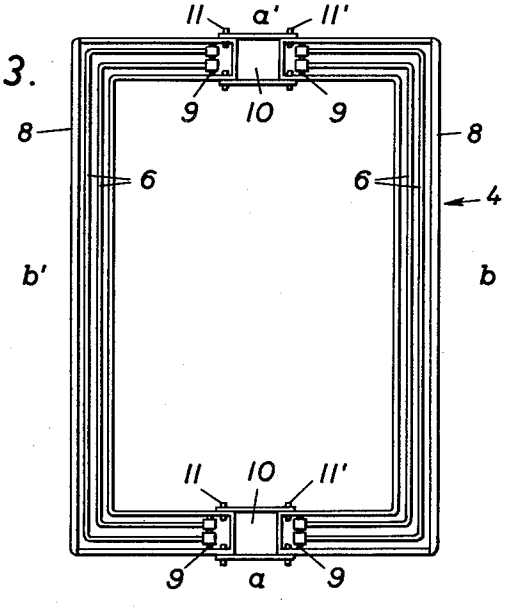


FIG. 3.



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RAIN OR WEATHER COVER FOR SHIP'S HATCHES, OPEN RAILWAY TRUCK AND THE LIKE

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2 Claims. (Cl. 135—5)

The present invention relates to rain or weather covers for use on ships, on open railway trucks and the like whenever it is desired temporarily to protect an open space intended to contain cargo and also the cargo itself contained therein.

In fact, when a ship or a railway truck is loaded or unloaded in the rain, the hatches are opened and rain water penetrates the hold or the truck involving the danger of damaging the cargo.

A series of different protecting devices have been employed to avoid this problem. Use has been made of small and very high hatch covers arranged to roll on transportable beams placed across the hatches. Such hatch-covers are opened by a single operator when it is necessary to introduce or to extract a parcel or the like. The use of such covers has also been combined with a collapsible umbrella like cover attached to the hoist and adapted to seat on the hatch to cover the opening.

In railway cars, use has been made of pivotally mounted collapsible canopies. Such canopies are adapted to cover or uncover the entire opening of the truck and are permanently secured to the front walls thereof.

The device according to this present invention constitutes an improvement with regard to the aforementioned known arrangements.

The device of the invention is characterized in that it consists of an open frame adapted to be temporarily located on and supported by the edges of the opening through which cargo is charged or discharged and which is to be protected, the canopy hoops being pivotally secured to this frame to extend over said opening or to be collapsed at will.

According to another feature of this invention the said frame fits in the said opening.

According to a still other feature of the invention, the said frame is of a substantially rectangular form.

According to a still further features of the invention, in the case where use is made of cover sections to close the hatch or the like, the dimensions of the frame correspond to those of a hatch-cover section.

The canopy may be of a simple or double type, at will.

It is apparent to anyone conversant with the art that such a device affords may advantages over the known devices. In fact, in the first place, the entire structure is very light and needs no preparatory work whatsoever to be installed. For instance on ships it will suffice to displace one hatchcover section and replace it by the aforementioned frame with its canopy or canopies. As soon as the work has been performed, the frame is removed and displaced to any other desired point of the hatch.

In the second place the efforts to extend or to collapse

the canopy are but very small and the handling thereof is easy, safe and rapid.

Furthermore, the stowage of the frame or frames is not complicated due to the mounting of the canopy or canopies on the frame, which for instance can be suitably channelled and also made collapsible.

It must also be observed that a double canopy has the particular advantage that the cover may act as a protection even when the hoisting wire is pending in the hold between the two extended canopies and need only be opened at the moment when the hook with or without cargo is passing up or down.

In the drawing given solely by way of example:

FIGURE 1 shows diagrammatically a plan view of a ship provided with hatchcover sections,

FIGURE 2 is an elevational sketch of the ship provided with a device according to the invention, and

FIGURE 3 is a plan view on an enlarged scale showing the said device.

According to the embodiment of FIGURE 1, reference numeral **1** designates the hatchway coaming, **2** a number of hatch cover sections and **3** a mast in front of the hatchway, the view is diagrammatic and neither the winch nor the machinery are shown in FIGURE 1.

FIGURE 3 shows the device according to the invention. In this example it comprises a rectangular frame **4** comprising side members *a*, *a'* and front members *b*, *b'*. This frame carries the canopy **5**. This latter comprises hoops **6** and a piece of material constituting cover **7** secured to the end portion of said latter. The free or lower edges of the cover **7** are secured at **8** to member *b*, *b'*. The hoops **6** can have any desired shape, for instance a rectangular one as shown in FIGURE 3 and they are pivotally secured to the members *a*, *a'* of the frame by means of pivots **9**.

All of the members *a*, *a'*, *b*, *b'* may have channel like cross sections so as to permit the hoops when the canopy is retracted of being entirely or partially concealed thereon.

If desired the frame members *a*, *a'* may be of two pivotally interconnected portions as shown in FIGURE 3. The connection may consist of a simple pivot or comprise an intermediary part **10** pivotally connected at **11**, **11'** to the two portions forming members *a*, *a'*. Thus both frame parts may be folded together so that the canopy unit may easily be stowed and protected against rain when not in use. In fact said two frame parts when the frame is folded form a closed space surrounding and protecting the canopy hoops **6** and the cover **7**.

The use of a canopy which consists of two elements as shown affords the essential advantage of permitting to open the hatch by retracting both elements only to the extent needed for the passage of the cargo. In fact the canopy is arranged so as to surround the hoisting wire and to leave only a very small slot which may, by the way, be covered by a rubber profile or the like.

The canopy may be operated preferably hydraulically or pneumatically by the winch operator or by someone belonging to the crew placed on the deck near the hatchway so that the device according to the invention, besides giving a better protection of the cargo, also effects a saving of labour. Said hydraulic manoeuvring can be arranged in many different ways and does not form part of this invention.

I claim:

1. Protective apparatus for a substantially horizontal surface having an opening therethrough, said apparatus comprising a pair of sections detachably supported on said surface, each section being hollow, means pivotally connecting said sections together to form a frame having an aperture coincident at least in part with said opening, a canopy hoop for each said section pivotally supported on the respective section adjacent said means for movement between retracted and extended positions, said canopy hoop being of the same shape as a respective section for being enclosed in the same in said retracted position, a flexible cover operatively coupled to each said canopy hoop and covering said aperture with said canopy hoops in the extended position, said cover being enclosed in said sections with said canopy hoops retracted, said means enabling pivotal movement of said sections with the latter detached from said surface to form a closed casing with the canopy hoops and flexible cover enclosed in said sections.

2. Apparatus as claimed in claim 1 wherein said sections are substantially of channel shape, said frame being rectangular with said sections open and on said horizontal surface.

References Cited in the file of this patent

UNITED STATES PATENTS

638,651	Standfield	Dec. 5, 1899
1,072,611	Hayes	Sept. 9, 1913
2,531,501	Cline	Nov. 28, 1950
2,844,117	MacGregor et al.	July 22, 1958

FOREIGN PATENTS

16,156	Great Britain	Dec. 10, 1886
16,166	Great Britain	Dec. 10, 1886
423,854	France	Apr. 28, 1911
694,174	France	Sept. 9, 1930