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Jonsson

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[54] **SYSTEM FACILITATING OPERATIONS TO BE CARRIED OUT ON A SHIP**

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[30] **Foreign Application Priority Data**

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[52] **U.S. Cl.** **182/36,** 182/129, 182/142

[51] **Int. Cl.** **E04g 3/14**

[58] **Field of Search** 182/129, 150, 47, 36, 37; 52/64, 72, 143

[56] **References Cited**

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[57] **ABSTRACT**

To permit carrying out work on a ship's hull, such as sand cleaning, painting etc. under unfavorable weather conditions it has been necessary hitherto, — if work could be performed at all — to provide for temporary weather protection by way of tarpaulins and like means. The system herein described which permits such operations to be carried out on ship's hulls independently of weather conditions, comprises roof elements, wall elements and end wall elements so mounted as to form heatable premises separated from ambient air.

4 Claims, 3 Drawing Figures

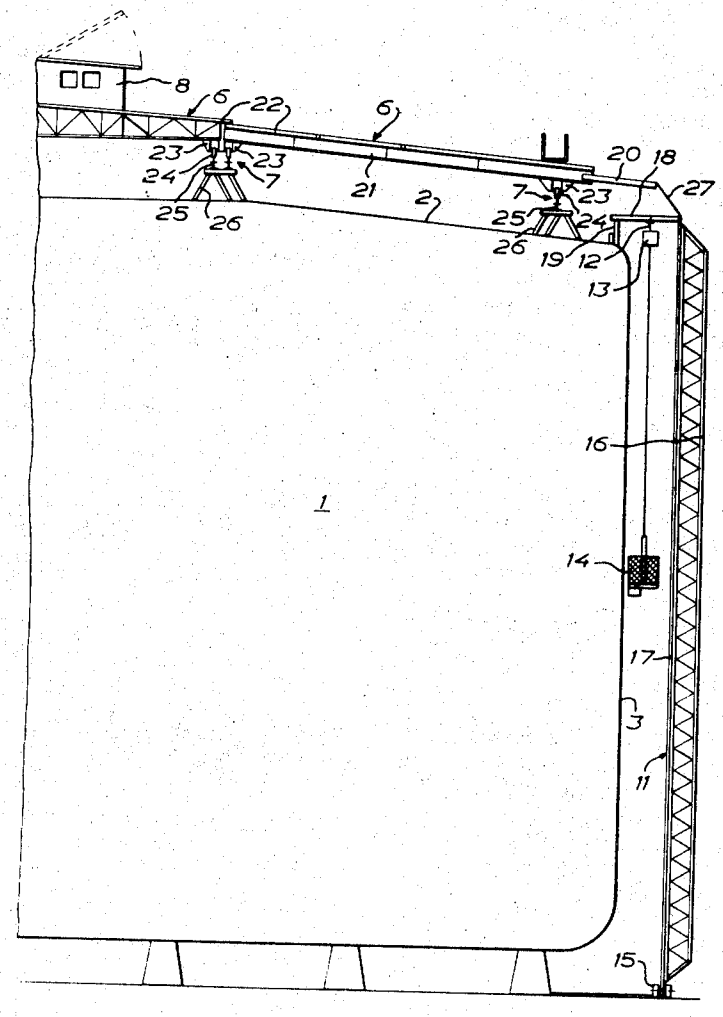

FIG. 1

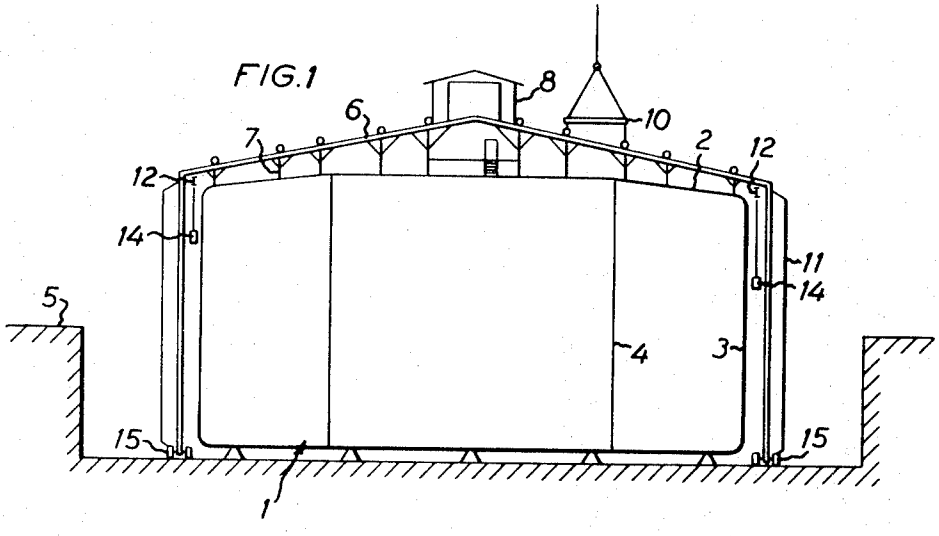
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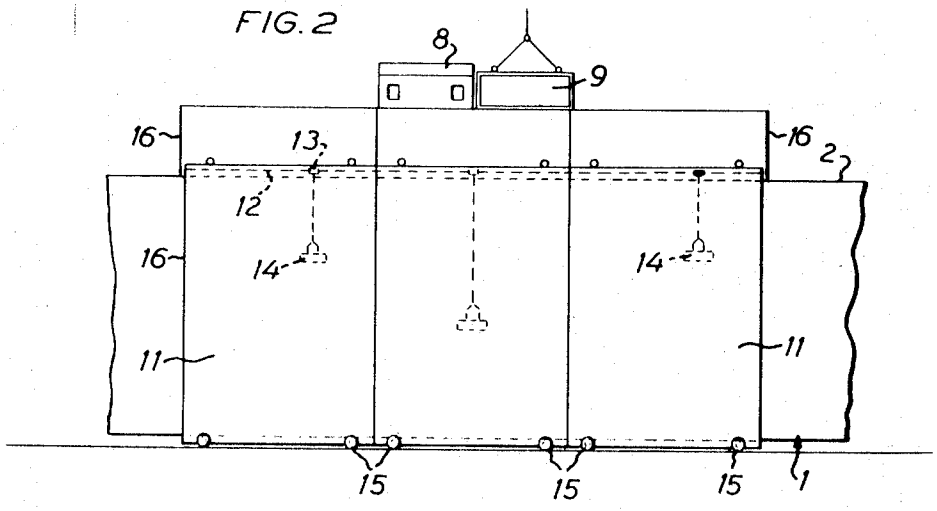
FIG. 2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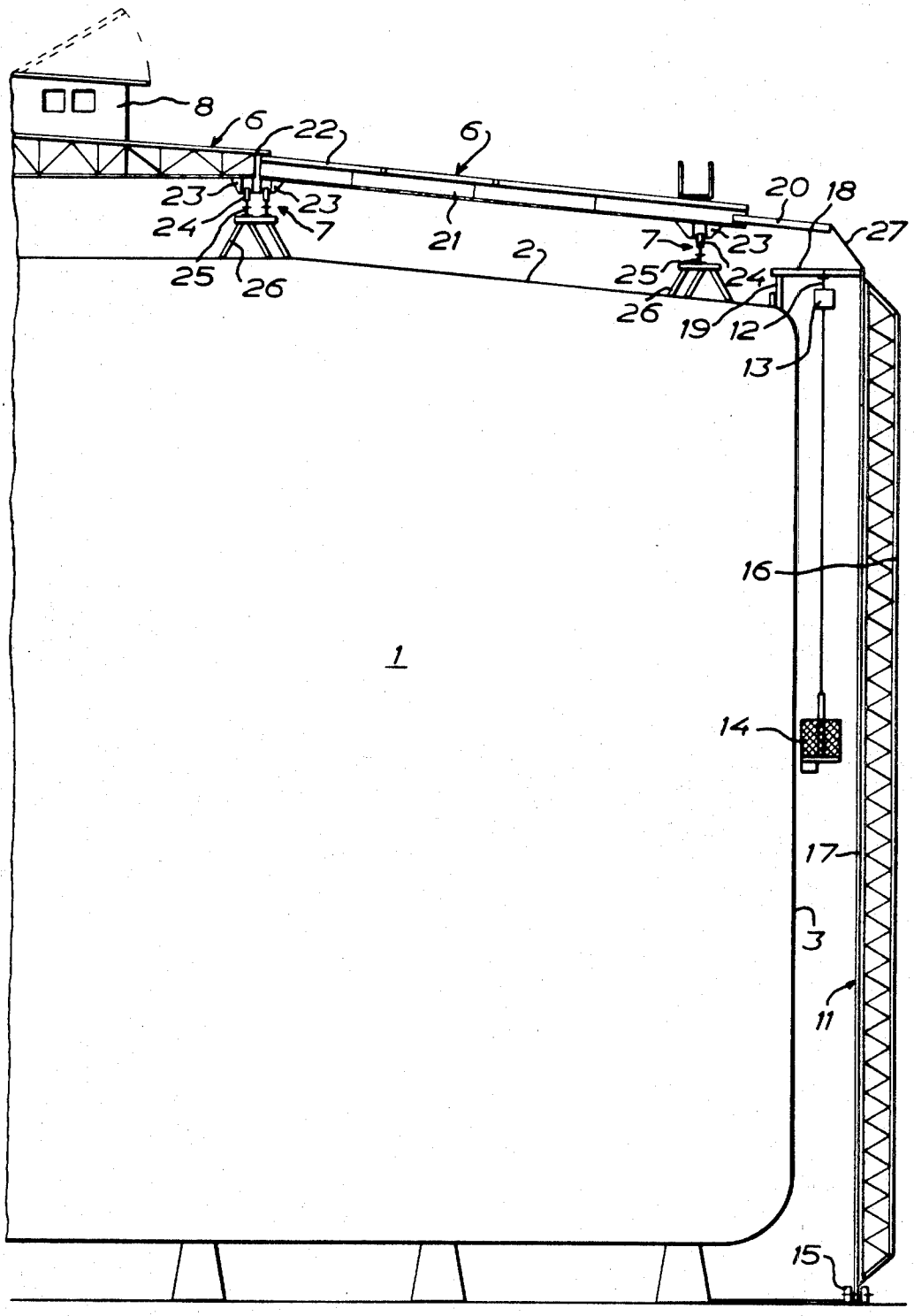
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FIG. 3

SYSTEM FACILITATING OPERATIONS TO BE CARRIED OUT ON A SHIP

This invention relates to a system which permits surface treatment operations, such as sand cleaning, painting etc., to be carried out on a ship's hull independently of weather conditions and without encroaching upon the other operations on the hull.

For outer and inner surface treatment and painting of hulls lying in docks it has been necessary hitherto to erect scaffoldings mainly for the purpose of performing the surface treatment. Naturally, this implies great expenditure of cost and time. Nowadays, higher requirements than before are placed on the surface treatment with the use of new materials which necessitate controlled air temperature and moisture during preliminary operating phases, application as well as drying and curing. Painting and like operations could be carried out only under certain weather conditions.

Also, the surface treatment and painting operations often encroach upon other work and thus jeopardize the established sequence of other operating procedures. The ever shorter building times in the docks have made it necessary to provide a more precisely timed painting programme.

The object of this invention is to solve the problems outlined above, to eliminate the necessity of setting up scaffoldings and to permit a complete screening of the portions of the ship's hull being treated.

The characteristic features of the system suggested by the present invention reside in that the system comprises roof elements to be placed on the deck of the ship's hull, wall elements to be disposed along the side of the ship's hull and on which there are arranged crane rails supporting work platforms which can be moved and raised and lowered along the sides of the ship's hull, and end wall elements to be mounted between the deck or ship's side and the roof elements or wall elements, and in that the roof, wall and end wall elements enclose heatable premises separated from the ambient air.

A preferred embodiment of the system will be described more in detail hereinbelow with reference to the accompanying drawing in which

FIG. 1 schematically shows a system set up in conjunction with a ship's hull shown in cross section;

FIG. 2 is a side view of the system.

FIG. 3 is a cross sectional view in large scale of the system of this invention mounted at a ship's hull.

In the drawing, 1 designates the ship's hull, 2 the deck, 3 the shell plating and 4 longitudinal bulkheads. The dock is designated 5. The system comprises roof elements 6 which are supported on the deck 2 by means of stands 7. One of the central sections is formed as a site shed 8 housing for instance at a lower level repair shop and foreman office and at an upper level a room equipped for central paint mixing and accommodating paint pumps by which paint is dispensed to the various parts and premises of the ship. At the same level there is also a platform carrying paint supply containers 9. All roof elements can be raised with the aid of a lifting yoke 10. The wall elements 11 positioned along the ship's side are provided with crane rails 12 on which run over-head cranes 13 which carry raisable and lowerable work platforms 14 in cables. Alternatively, the crane rails can be suspended in brackets

fastened in the gutterway of the ship. In that case the crane rails can extend throughout the length of the ship's hull, and the work platforms can be used for carrying out work along the ship's sides before, during and after the surface treating operation. The wall elements 11 have wheels 15 with which to roll on the bottom of the dock when they are moved along the ship's side.

To provide the contemplated screening of the portions of the ship's hull 1 being surface treated latticework end wall elements 16 are placed at the ends of the roof elements 6 in upright position on the deck 2, said end wall elements being divided into sections and covered with a suitable cloth or sheet metal material.

End wall elements consisting of collapsible latticework frames covered with cloth or sheet metal material are placed also at the ends of the wall elements 11, and said end wall elements are swung inwards into engagement with the ship's side whereby premises entirely separated from ambient air are obtained.

If necessary, hot air can be blown into the premises inside the screens so that a temperature suited to the type of work concerned and the subsequent drying and curing process is attained.

As seen in FIG. 3, which is a cross section in larger scale showing part of a slightly modified embodiment of the system mounted at a ship hull, the wall elements include frameworks constituted by uprights 16 and longitudinal beams and sheating 17. Struts 18 are attached to the uppermost longitudinal beam of the wall elements and said struts are in turn attached to posts 19 which can be temporarily welded or otherwise affixed at the gutterway of the ship hull. In the preferred embodiment shown in detail on FIG. 3 the crane rail 12 is carried by the struts 13.

As can be further seen from FIG. 3 the outer edge of the outer roof element 6 has a retractable portion 20 which covers the outer portion of the ship deck and said portion carries hinged flaps 21 which close the opening between the upper edge of the wall element 11 and the retractable portion 20.

The roof elements 6 include frameworks i.e. beams 21, and sheating 22 and are carried by the stands 7. When the roof elements are adapted to be moved by means of a crane or the like as in FIG. 1 and 2 the stands are in the form of uprights, preferably having means for adjusting their length.

In the embodiment according to FIG. 3, the stands comprise brackets or the like 23 attached to the underside of the roof elements frameworks 21, the brackets 23 carry wheels 24 adapted to roll along rails 25 resting on trestles 26 temporarily affixed to the deck of the ship. The roof elements accordingly one by one can be rolled along the deck.

What I claim and desire to secure by Letters Patent is:

1. An apparatus for housing workmen for carrying out the surface treatment of a ship's hull comprising roof elements to be placed on the deck of the ship's hull, wall elements to be disposed along the side of the ship's hull, crane rails on said wall elements, work platforms carried by said crane rails which can be moved and raised and lowered along the sides of the ship's hull, and end wall elements at the end of said wall elements and mounted between the ship's side and the roof elements, whereby the roof, wall and end wall ele-

ments form enclosed heatable premises separated from the ambient air.

2. The apparatus of claim 1, wherein the roof elements, the wall elements and the end wall elements are movable in relation to the ship's hull.

3. The apparatus of claim 1, wherein said end wall elements consist of collapsible lattice work frames having an outside covering.

4. The apparatus of claim 1 including partition means forming separate work areas.

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