

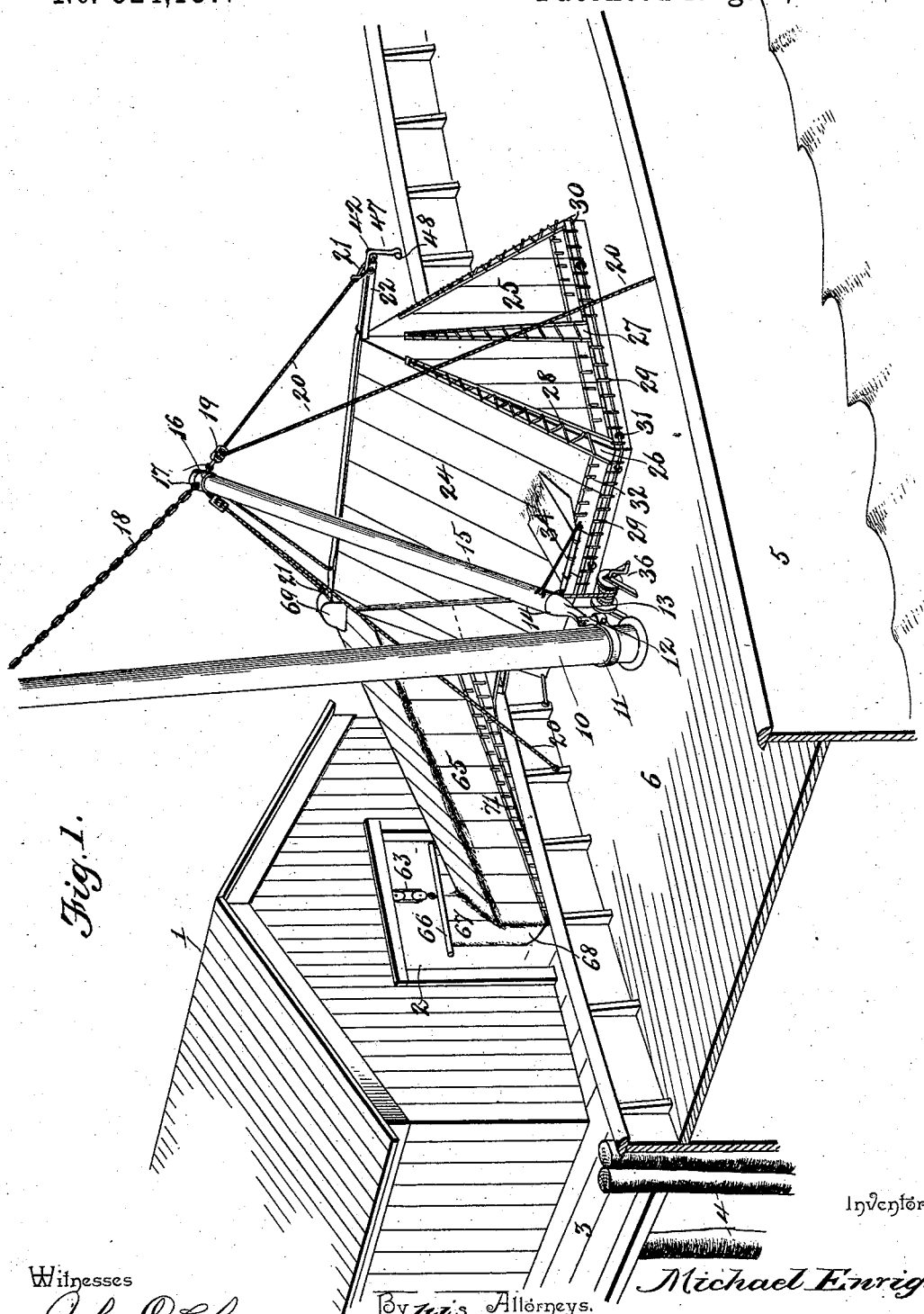
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3 Sheets—Sheet 1.

M. ENRIGHT.
PORTABLE AWNING FOR VESSELS.

No. 524,137.

Patented Aug. 7, 1894.



Witnesses

John C. Shaw
W. S. Duwall

By *his* Attorneys.

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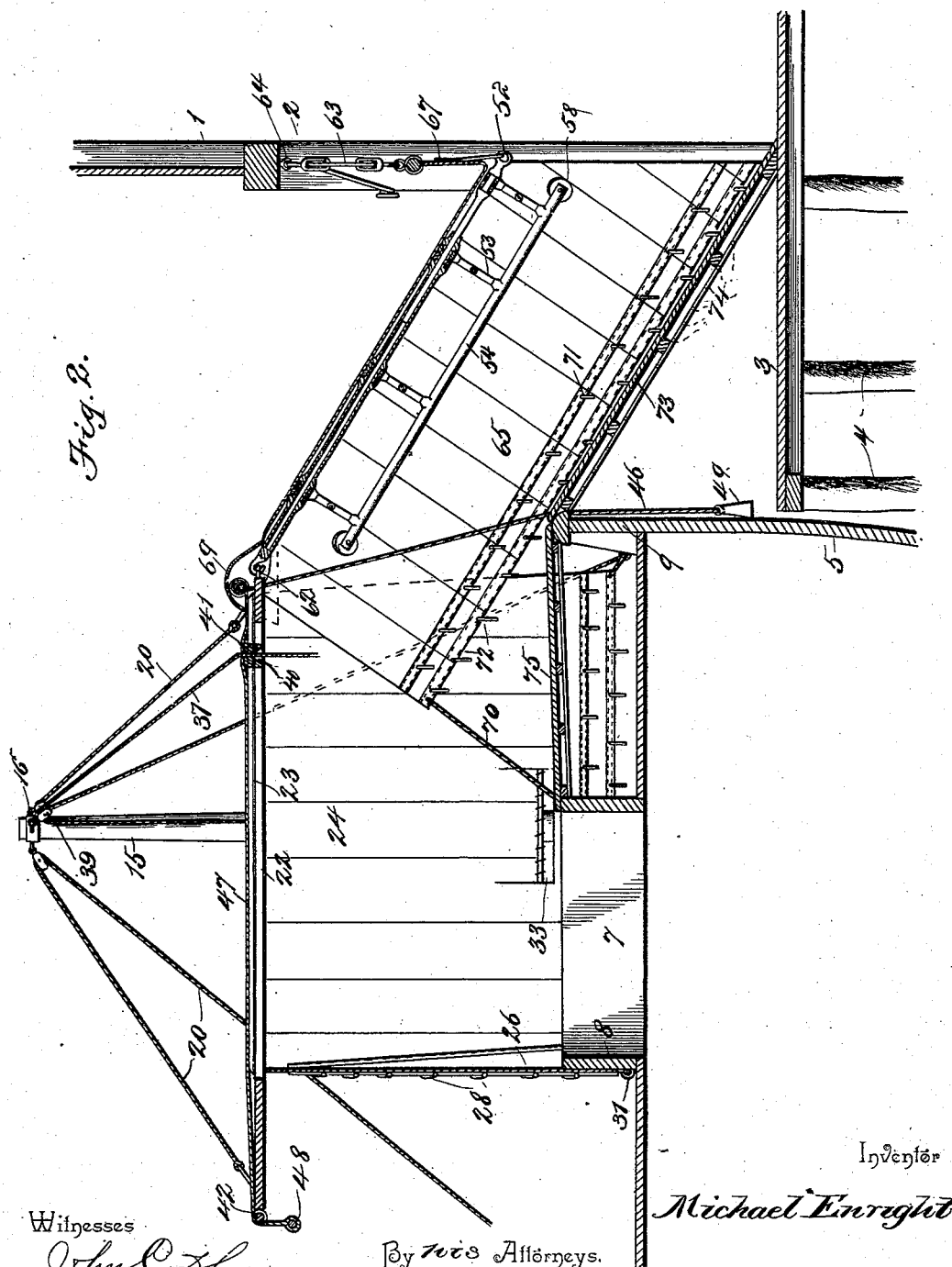
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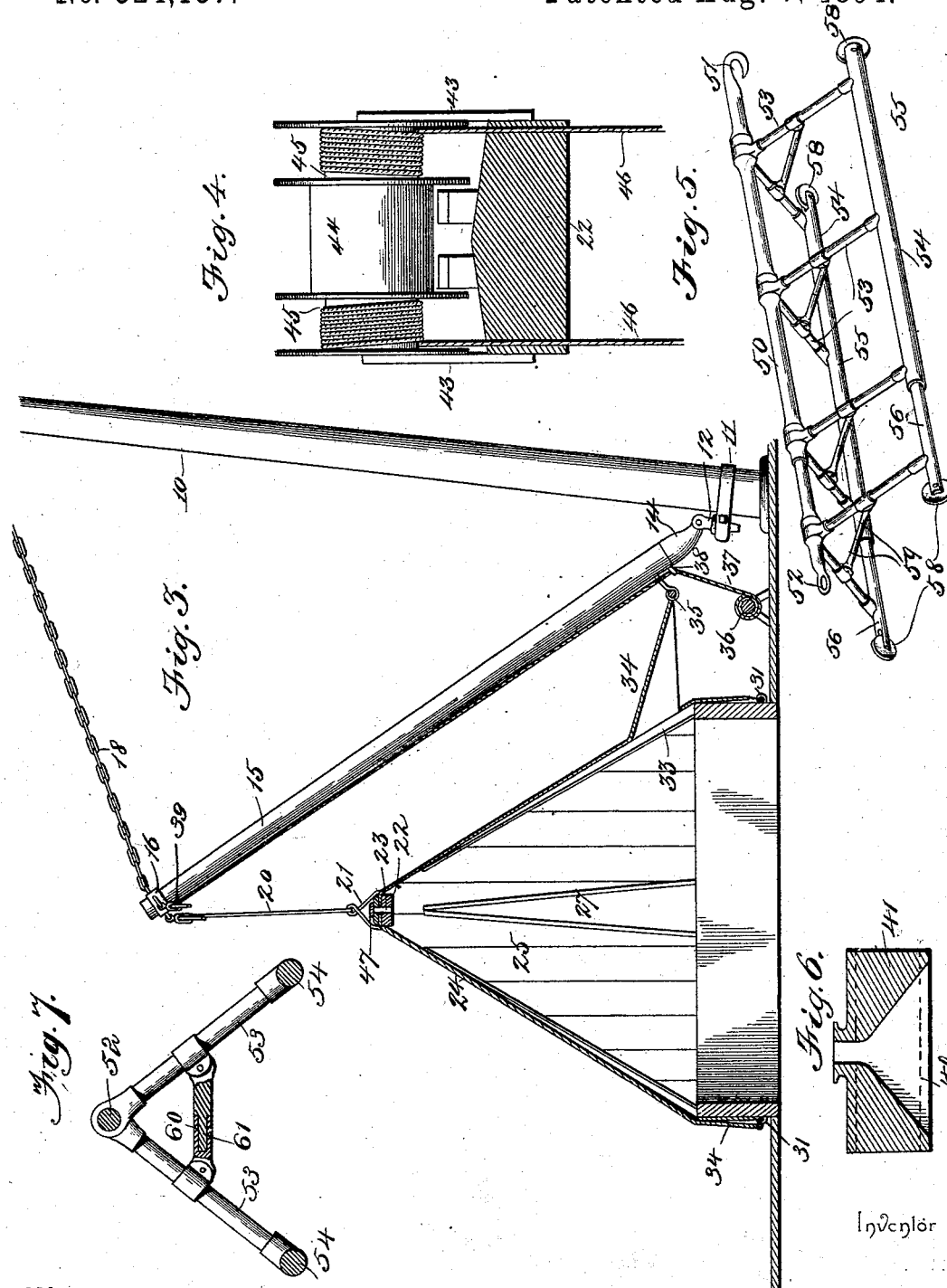
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UNITED STATES PATENT OFFICE.

MICHAEL ENRIGHT, OF NORFOLK, VIRGINIA.

PORTABLE AWNING FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 524,137, dated August 7, 1894.

Application filed September 26, 1893. Serial No. 486,548. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL ENRIGHT, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented a new and useful Portable Awning for Vessels, of which the following is a specification.

My invention relates to improvements in awnings, and the objects in view are to produce a cheap, simple, and compact awning designed to be used by vessels during the operation of loading and unloading, and to cover the gang-plank and hatchway so that merchandise will be preserved from inclement weather and the operators for handling the same will be under cover; furthermore, to so arrange the awning as to automatically take up and let out in accordance with the settling or rising of the vessel as the same receives or discharges its cargo; to be detachable or readily unshipped for storing; and to adapt it to be adjusted in a convenient manner to any size of hatch-coaming.

Various other objects and advantages of the invention will hereinafter appear and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a portion of a vessel and a warehouse, an awning or housing embodying my invention being applied thereto. Fig. 2 is a vertical longitudinal sectional view through the awning or housing, the vessel being shown in transverse section. Fig. 3 is a transverse sectional view through the awning or housing and the deck of the vessel. Fig. 4 is a detail in section and partial elevation of the drum hereinafter described. Fig. 5 is a detail in perspective of the extensible folding frame for supporting the inclined housing. Fig. 6 is a detail of the carriage or block. Fig. 7 is a detail in cross section of the extensible folding frame.

Like numerals of reference indicate like parts in all the figures of the drawings.

I have illustrated an ordinary warehouse 1, having a door opening 2 and mounted upon a wharf 3, the flooring of which is supported by the usual piles 4. At the sides of the wharf is located the vessel 5 having the deck 6 pro-

vided with a hatchway 7 that is surrounded by the hatch-coamings 8. The vessel has the usual rail 9 at its sides and the mast 10.

Secured to the mast at any suitable point thereon is a ring 11 in which is swiveled a stud 12. The upper end of the stud is bifurcated and has pivoted therein by a pin 13 the lower end 14 of a crane-arm 15 which is provided at its upper free end with a ring 16 having ring-bolts 17.

To the upper ring-bolt a guy chain 18 is made fast, the same extending to the mast and serving to support the crane-arm at any suitable inclination. By reason of the pin 12 being swiveled in the ring 11 it will be seen that the crane-arm is likewise swiveled and capable of horizontal movement, and, furthermore, by reason of the said arm being pivoted by the pin 13 to the swiveled pin it will be seen that the same is capable of vertical movement, or, in other words, the crane-arm 15 is connected to the mast by a universal-joint. In the opposite ring-bolts pulleys 19 are located, and the same have passed there-through hoisting-ropes 20, whose lower ends may be fastened to the deck at any suitable point and by any suitable means, but whose remaining ends are connected to bails 21. These bails 21 are connected to the opposite ends of and embrace a horizontal bar 22, which between its ends is provided with a longitudinal slot 23. Connected to this bar 22 are the opposite inclined side walls 24 of a tent, awning, or housing, and the said side walls are inclined and designed to extend over the fore and aft sides of a hatch-coaming and are connected at one end by an A-shaped end wall 25.

At the corners of the housing gussets 26 are inserted, and a similar gusset 27 is located at the center of the end wall. The opposite edges of these gussets are provided with eyelets, and lacing cords or ropes 28 are passed through the eyelets and serve to draw the edges of the gussets together so that as will be obvious the housing is thus enlarged or made smaller so as to adapt it to hatches of various sizes. The lacing cords or ropes 28 form a very convenient means for adjusting the housing to the size of hatchways, 100

which as is well known, vary in vessels, and thus one housing may be made to serve its function in any vessel loading or unloading at any particular point. The lower edges of the side and end walls are provided with short clew-ropes 29 by which means the lower edges of said walls may be clewed to a rope 30 that is run through ring-bolts 31 around the hatch-coaming. Reefing lines 32 are provided above the clew-lines so that the height of the housing may be decreased.

Each of the side walls 24 has an opening 33 formed therein, and from the same extends a flap or awning 34 provided at its outer end with a spar 35. The length of this flap may be decreased by reefing the same when its presence is unnecessary. It is primarily designed, however, to preserve from the weather the winch-man who stands upon the deck by the winch 36, and, as is well known, operates the winch for raising and lowering the cargo into the hold of the vessel. The opening 33 also affords the winchman a sight of the cargo as the same approaches the hold, and he is thus enabled to observe the proper time for easing or lowering and avoid injury to the cargo.

The hoisting rope 37, which is operated by the winch 36, passes through a suitable guide 38 in the crane-arm 15 and through a pulley 39 at the upper end of said crane-arm. The remaining end of the rope passes down through a flared opening 40 formed in a metal carriage or block 41, which is mounted over the slot 23 in the bar 22 and projects below the same for attachment to the cargo. The carriage or block it will be understood rides over the bar 22 in accordance with the position of the object being elevated or lowered.

At the rear end of the bar 22 there is supported a loose pulley or roller 42, and at the front end thereof in standards 43 a shaft is journaled, the same having a central drum 44 and opposite side drums 45. Ropes 46 are passed in similar directions about the drums 45, while a broad band or tape 47 is passed in a reverse direction around the central drum 44 and extends rearward over the bar to the end thereof and depends from the roller 42 below which it is provided with a weight 48. The ropes 46 are provided with weights 49 which serve to operate the drums 44 and 45 so as to unwind the said ropes thereon and wind the tape 47 on its drum 44. The rear weight 48 serves to maintain the tape flat upon the bar 22 and over the slot 23 therein so that moisture is prevented from gaining access to the interior of the housing through the slot. The tape is perforated at a suitable point and is secured to the carriage or block 41 so that the two operate together upon the bar.

In Figs. 5 and 6 I have illustrated my extensible folding frame for supporting the inclined portion of the housing, that is to say that portion thereof which covers the gangway that leads from the rail or side of the

vessel to the door of the warehouse. This frame consists of a main backbone or rod 50 which terminates at one end in a hook 51 and at its opposite end in an eye 52. At intervals there are arranged upon the rod 50 pivotal arms 53, the outer ones of which are connected to side rods 54. These side rods are telescopic as shown, consisting of tubular and solid sections 55 and 56, respectively, and each is bifurcated at its end and provided with a small roller 58 by which the frame may be transported.

The frame it will be observed may be collapsed by swinging the arms 53 toward each other, the same moving on the rod 50, or it may be supported in an open position by means of intermediate brace-rods 59, one of which is attached to each of the arms 53. The brace-rods on one set of arms are provided with sockets 60 at their free ends and the opposite rods with shouldered tenons 61 that enter the sockets and thus become locked and brace the frame in an open position.

In arranging the parts in position the hook 51 is connected with an eye 62 with which the front end of the bar 22 is provided, and the eye 52 of the frame is connected to a fall 63 which depends from any part of the upper side of the door-frame 2 of the warehouse. This fall may be connected to any one of a series of eyes 64, and I preferably locate such eyes at intervals along the upper side of the door-opening for the reason that the hatchway of the vessel is not always directly in front of the door. Supported by this frame is the inclined portion of the housing, the same comprising opposite side walls 65, the upper ends of which take under the front edges of the side walls 24 of the housing, and the front ends of which are connected to a transverse bar 66 that is made fast to the fall 63 before mentioned. The walls 65 extend beyond the frame so as to form a vertical portion 67 to prevent moisture passing from the same into the warehouse door. This wall 67 extends laterally beyond the side walls 65 which drop vertically from the side bars of the frame and is extended at its lower end rearward or outward forming gutters or pockets 68, which causes the water to follow the same and be discharged over the front of the floor of wharf 3.

A hood 69 is supported over the drums 44 and 45 and also serves to cover the connection between the horizontal and inclined portions of the housing.

Clew-lines 70 are secured to the upper ends of the walls 65 and may be made fast to any portion of the deck or hatch-coaming for the purpose of clewing down the said walls 65. Reefing ropes 71 are provided upon the walls 65 and also short clew-ropes 72 are provided at the lower edges of said walls, whereby the walls may be clewed down to an inclined gang-plank 73 that leads from the rail of the

vessel to the wharf and it is provided with a series of perforations 74 for the accommodation of said clew-lines. It will be understood that a second gang-plank 75 leads from the rail of the vessel to the hatch-coaming.

It will be understood that in warm weather the clew-lines are not used and the flaps or side walls are left free, or may be swung out and secured by the clew-lines 70 or other stays that may be provided to objects upon the vessel, so as to form practically an awning or housing without sides and leaving the air free to pass under the same. In heavy weather, however, the clew-lines are employed and all parts clewed down snug so as to prevent access of wind and rain.

The operation is carried on the same as before, men being stationed at suitable points on the gang-plank, the hatchway, and winch, and the fall rope 37 is carried for instance when taking on cargo, to the warehouse, the carriage or block 41 moving therewith, after which the winch is started and the cargo drawn up the gang-plank 73 to a gang-plank 75, and lowered into the hold.

My device will be found extremely serviceable and completely filling a long felt want by stevedores and others engaged in loading and unloading vessels.

It will be seen that as the vessel becomes filled and settles the framework for supporting the inclined housing will gradually contract or telescope so that it is always the proper length from the vessel to the warehouse, or, on the other hand, when unloading, the vessel lightens, and consequently rises, the said framework will distend the distance increasing from the rail of the vessel to the warehouse. Thus it will be seen that said discrepancies will be compensated for automatically.

It will also be obvious that the device is adapted for receiving cargoes from the upper stories of warehouses, the usual chute being employed down which the cargo is slid to the deck and swung into the hold.

I do not limit my invention to the precise details of construction herein shown and described, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having described my invention, what I claim is—

1. In a portable awning for vessels, the combination of a swinging crane-arm adapted to be supported over the hatchway of a vessel, an adjustable housing supported by the crane-arm, a framework extending from the housing beyond the side of the vessel, and an adjustable housing mounted on said latter framework, substantially as specified.

2. In a portable awning for vessels, the combination of a crane-arm adapted to be arranged over the hatchway of a vessel, a bar adjustably connected to the crane-arm, a hous-

ing supported by the bar, an extensible framework loosely connected to the front end of the bar and at its opposite end adapted to be connected to a warehouse, and a housing carried by said framework, substantially as specified.

3. In a portable awning for vessels, the combination of a crane-arm adapted to be supported over the hatchway of a vessel, a housing supported by the crane-arm and designed to be located over said hatchway, a telescopic folding frame connected to one end of the housing and at the opposite end adapted to be connected to a warehouse, and a housing arranged on said frame, substantially as specified.

4. In an awning of the class described, the combination of a crane-arm adapted to be extended over the hatchway of a vessel, the housing comprising opposite side and end walls supported by the crane-arm, gussets set in the four corners and provided at opposite edges with eyelets, lacing cords passed through the eyelets, and an inclined housing leading from the end of said housing to a warehouse, substantially as specified.

5. In an awning of the class described the combination of a crane-arm adapted to be arranged over the hatchway of a vessel, opposite side and end walls of a housing supported by the crane-arm, gussets set in the corners of the housing and in the end walls thereof and provided with lacing eyes at opposite edges, lacing cords passed through the eyes, and a housing connected to the first mentioned housing and adapted at its outer end for connection to the warehouse, substantially as specified.

6. In an awning for vessels, the combination with ring-bolts adapted to be secured in the coaming of the hatchway, and a rope passed through the ring-bolts and adapted to encircle the hatchway, of a crane-arm adapted to be arranged above the hatchway, a bar supported by the crane-arm, a housing depending from the bar, and clew-ropes at the lower edge of the housing for engaging the said ropes, substantially as specified.

7. In an awning for vessels the combination of a crane-arm adapted to be connected by a universal-joint to the mast of a vessel, a bar, a hoisting-rope connecting the bar with the crane-arm, and a housing supported by the bar, substantially as specified.

8. In an awning for vessels the combination of a crane-arm adapted to be extended from the mast-elevating ropes of a vessel loosely connected with the crane-arm, a bar connected to the elevating ropes, the housing supported by the bar and adapted to surround the vessel's hatchway and provided in its opposite side walls with openings having awnings, a winch located opposite one of the openings, and a fall-rope connected with the winch and passed through a slot in the bar, substantially as specified.

9. In an awning for vessels, the combination

of a crane-arm, a slotted bar supported by the crane-arm, a housing depending from the slotted bar and adapted to extend around the hatch-coaming of a vessel, a block having an opening arranged upon the slotted bar, a fall rope passing through the opening in the bar, and a winch for operating the fall-rope, substantially as specified.

10. In an awning for vessels, the combination of a crane-arm adapted to be connected to the mast of a vessel and to extend over the hatchway thereof, a bar slotted between its ends and supported adjustably by the crane-arm, a roller located at one end by the bar, opposite outer and an intermediate drum arranged at the opposite end of the bar, weighted ropes arranged on the outer drums and similarly wound, an intermediate tape arranged on the inner drum and oppositely wound and passing over the roller at the opposite end and below the same provided with a weight, a perforated block mounted for reciprocation on the bar and connected to the tape which latter covers the slot in the bar, and a fall-rope connected with the crane-arm and passed through the opening in the block and slot in the bar, substantially as specified.

11. The combination in a portable awning for vessels, of a frame consisting of a telescopic rod 50, a series of swinging arms pivoted in pairs upon the rod, outer telescopic side rods

54, and intermediate detachable stretcher-bars or braces 59, and a housing arranged on the framework, substantially as specified.

12. The combination with oppositesupports adapted to be fixed on a vessel and warehouse, of the telescopic rod 50, the pivoted arms 53, the telescopic rods 54 connected to the outer ends of the rod and having wheels at their ends, and pivoted stretcher-bars 59 connected to the bars 53, those at one side having sockets and those at the other side having tenons for engaging the sockets, and the housing arranged on the framework, substantially as specified.

13. In a portable awning for vessels, the combination of the housing adapted to be arranged on a vessel, and the inclined housing adapted to be placed between the latter and a warehouse, the said inclined housing having its lower end terminating in a vertical wall suitably supported at the warehouse and its opposite side edges extended backward forming water-shedding gutters or pockets 68, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MICHAEL ENRIGHT.

Witnesses:

R. A. BURROUGHS,
GORDON MELHADO.