(No Model.) 2 Sheets—Sheet 1.

C. J. VAN SLUYS & C. STEFFELAAR, JZN.

DECK SUPPORT FOR SHIPS' BOATS.

No. 455,137. Patented June 30, 1891.

Fig 1.

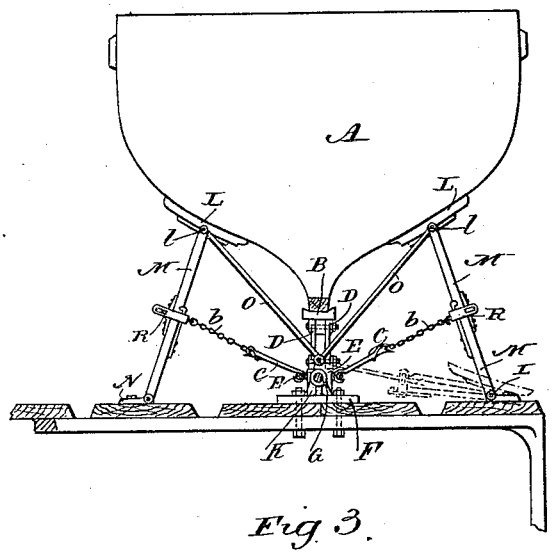
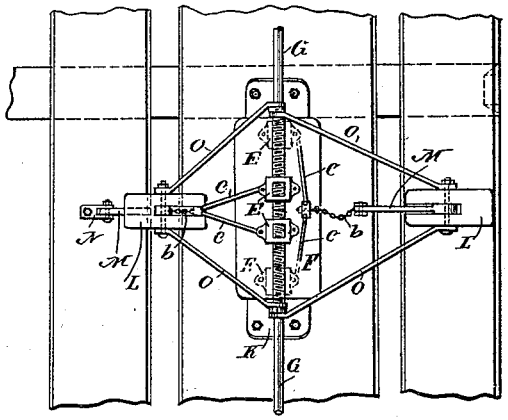


Fig 3.



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(No Model.) 2 Sheets—Sheet 2.

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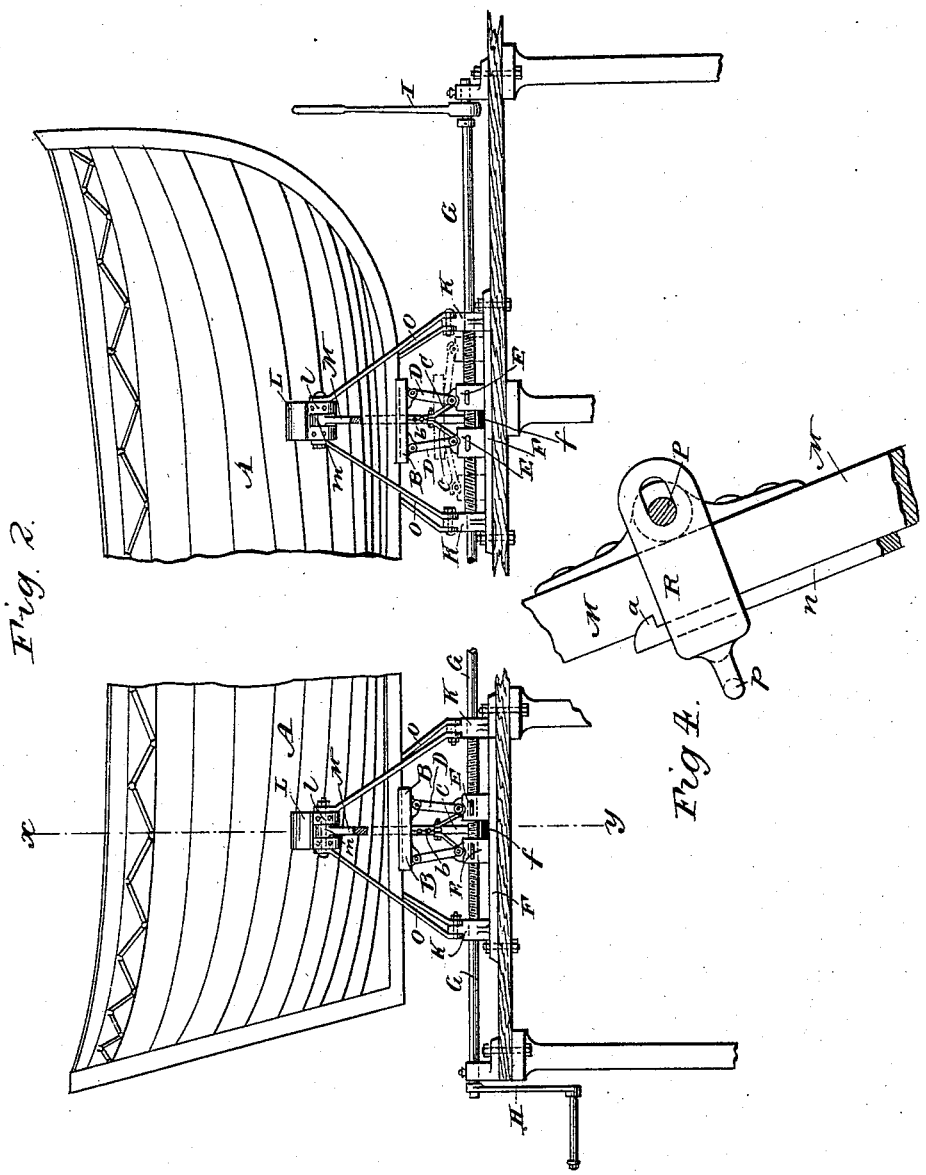

Fig. 2.

Fig 4.

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UNITED STATES PATENT OFFICE.

CORNELIS JOHANNES VAN SLUŸS, OF YMUIDEN, AND CORNELIS STEFFELAAR, JZN., OF VELZEN, NETHERLANDS.

DECK-SUPPORT FOR SHIPS' BOATS.

SPECIFICATION forming part of Letters Patent No. 455,137, dated June 30, 1891.

Application filed November 19, 1890. Serial No. 371,895. (No model.)

To all whom it may concern:

Be it known that we, CORNELIS JOHANNES VAN SLUŸS, a resident of Ymuiden, Holland, and CORNELIS STEFFELAAR, Jzn., a resident of Velzen, Holland, both subjects of the King of Holland, have invented certain Improvements in Deck-Supports for Ships' Boats, of which the following is a specification.

Our said invention relates to an improved construction of supports for ships' boats, so arranged as to facilitate the rapid launching of the boats, and at the same time to provide them with a safe and secure resting place on the deck of the vessel when they are not required for use.

In order to more clearly set forth the nature of our said invention, we will at once proceed to describe the same with reference to the accompanying drawings, in all the figures of which the same letters refer to the same parts.

Of the said drawings, Figure 1 is a sectional elevation through *x y* of Fig. 2. Fig. 2 is a side elevation. Fig. 3 is a plan of one of the supports with the boat removed in order that the details may be more clearly shown. In this view one of the side bearings is shown when lowered into the position indicated by dotted lines in Fig. 1, as will be more fully explained hereinafter. Fig. 4 is a view, on a larger scale, of a detail of one of the side struts, to be hereinafter described.

Two or more supports are used for each boat. In Fig. 2 only two supports are shown, one at the stern and one at the bow of the boat A. The keel of the boat rests on suitably-shaped bearings B, hereinafter referred to as "keel-bearings."

A double set of struts D D, hereinafter referred to as "central struts," are hinged at their upper ends to the keel-bearings B and at their lower ends to the slide-blocks E, sliding on a bed-plate F. Each of the said slide-blocks E is provided with an internal screw-thread fitting right and left hand screw-threads on a longitudinal screw-shaft G, extending under the whole length of the boat and actuated by a crank H or ratchet-lever I or any other known means, as may be most convenient for the particular deck on which the apparatus is mounted. In order to insure a quick traverse for the slide-blocks E, the pitch of the right and left hand screws is made very coarse, and where it is only possible to rotate the shaft G by a ratchet-lever I we even prefer to employ screws with a double or triple thread. Suitable plumber-blocks K are provided for the shaft G and are secured to the bed-plate F or to the deck. As is well understood, the slide-blocks E will approach to or recede from each other, according to the direction in which the shaft G is caused to rotate. A stop-block *f* serves to limit the traverse inward of the slide-blocks E. The central struts D being of equal length and each receiving the same amount of displacement when the slide-blocks E are traversed, it is evident that the keel-bearings B will always retain their horizontal position.

To keep the boat upright, we provide side bearings L, connected by inclined radius-rods O, preferably made of round bar-iron, with the plumber-blocks K, to the tops of which the radius-rods O are pivoted. Jointed or articulated struts, hereinafter referred to as "side struts," are pivoted at one end to the side bearings L and at the other end to the brackets N, which are secured to the deck. The form of the side bearings L may be varied to suit the curves of the boat they are intended to support. We prefer to pivot the radius-rods O and the side struts M on a single bolt *l* on the under side of the side bearing L and to provide a slot *m* therein sufficiently wide to allow the side strut to pass, as shown in Figs. 2 and 3, in order that when lowered into the position indicated by dotted lines in Fig. 1 the side bearings L may lie as low as possible. The articulated side struts M are hinged together at P. The joint is surrounded by a strap R, slotted where the joint-pin P passes through, so as to allow the strap to move transversely to the side strut M. An enlarged view of the strap and the joint is shown at Fig. 4. Secured to the lower member of the side strut M, and also to the strap R, is a spring *n*, the hook *a* of which fits into a notch in the upper member of the side strut M, and while in this position preventing it from doubling up on the joint-pin P. The tendency of the spring *n* is to retain the parts in the position shown in Fig. 4. At the back of the strap R is a ring *p*, and

a chain *b* is secured at one end thereto, while the other end of the chain *b* is attached to a toggle or a pair of bars *c*. When the slide-blocks E recede from each other, the toggle *c* opens and the chain is pulled, so as to cause the strap R to slide transversely to the side strut M and release the hook *a* of spring *n* from the notch in the upper member of the side strut M. When this has occurred, the slightest further movement of the slide-blocks causes the strap to pull on the joint-pin, when the side strut M will collapse and fall down into the position indicated by dotted lines in Fig. 1 and in plan at the right-hand side of Fig. 3. The chain *b* is provided with snap-swivels or other similar well-known means of attachment to the strap R and the toggle *c*, so that it may be readily detached, if required, but yet not be liable to release itself accidentally. The junction of the chain *b* to the center of the toggle or bars *c* is preferably a bolt and nut to enable the length of the chain to be properly adjusted.

Fig. 2 shows in full lines the slide-blocks E in their extreme inner position against the stop-block *f*, in which position the central struts D are nearly vertical. When it is required to launch the boat, the shaft G is rotated and the slide-blocks E recede from each other, and during the first part of their traverse they cause the central struts D to gradually assume a vertical position and slightly elevate the boat. At the same time the chain *b* is pulled by the opening of the toggle *c*, whereupon the hook *a* is released from the notch in the upper member of the side strut M. The continued rotation of the shaft G and the consequent further separation of the slide-blocks E cause the side strut M to double up and the side bearings L to fall down in the manner hereinbefore described. As the central struts D separate at their lower ends, the keel-bearing B descends to the position shown in dotted lines in the right-hand half of Fig. 2, and the boat is lowered until it hangs quite free, supported only from the blocks of the davits, and may then be pushed through these and be launched in the usual manner.

It will be seen from the foregoing description that we prevent the whole weight of the fully-equipped boat from resting on the side bearings when the keel-bearing is lowered, and thus prevent damage to the sides of the boat.

In case the vessel from which it is desired to launch the boat were stranded and tilted over to one side, so as to cause the boat to swing inward, if the inside side bearing L were removed we should detach the chain *b* from the toggle or bars *c*, and thus allow only the outside side bearing L to fall down for the purpose of launching the boat. The inner side bearing L would then turn about its pivot and accommodate itself easily to the boat's side.

Although in Fig. 2 only two sets of supports, one at the bow and one at the stern, are shown, it is to be understood that any convenient number suitable to the length of the boat may be used.

Where a number of supports are used, the side bearings L L may in some cases be dispensed with for the intermediate supports and only keel-bearings B B be used. Where side bearings are used for intermediate supports, they may be connected by side connecting-rods to the side bearings of the bow and keel, so that they may all drop simultaneously.

If from the effects of collision or other accident the apparatus should be damaged or otherwise deranged, so that the slide-blocks E refuse to move, it is only necessary to give a smart tap to the strap R with a hammer, a hand-spike, or other convenient article, when the hook *a* will be released and the side strut M will collapse. The boat can then be pushed off the keel-bearings and swung through the davits over the ship's side.

Having fully described our invention, what we desire to claim and secure by Letters Patent is—

1. A deck-support for ships' boats, consisting of side bearings, in combination with intermediate keel-bearings, a longitudinal screw-shaft, and connections between said shaft and keel-bearings for raising and lowering them, substantially as hereinbefore described and set forth.

2. In a deck-support for ships' boats, the combination of the longitudinal shaft G, having right and left screw-threads thereon, the slide-blocks E, the articulated central struts D, and the keel-bearing B, substantially as and for the purpose hereinbefore described and shown.

3. In a deck-support for ships' boats, the combination of the slotted side bearings L, the radius-rods O, the articulated side struts M, said struts and rods being pivoted at their lower ends to suitable supports and pivoted at their upper ends to said side bearings, the transversely-moving slotted strap R, embracing the struts at the joints, the slide-blocks E, the longitudinal shaft G, having right and left hand threads thereon for operating the blocks, the toggles *c*, connecting said blocks, and chains *b*, connecting the toggles and the said straps to break or fold the struts when the blocks are moved apart, substantially as and for the purpose hereinbefore described and shown.

4. In a deck-support for ships' boats, the combination of a bar M, jointed and hinged at P, and the transversely-sliding slotted strap embracing the bar at the joint and having the spring *n*, provided with a hook *a*, engaging a notch in one section of the bar, the whole forming a broken-backed strut, with the side bearing L, pivoted to the upper end of the strut, substantially as set forth.

5. In a deck-support for ships' boats, the

combination, with the sliding blocks, their operating mechanism, the toggle *c*, connecting said blocks, and the chain *b*, detachably connected to the said toggle, of the inward-folding strut M, formed of two hinged sections, and the sliding slotted strap embracing the bar or strut at its joint and connected with the other end of the chain, substantially as set forth.

6. In a deck-support for ships' boats, the combination of the keel-bearing B, the slide-blocks E, mechanism for moving the blocks toward and from each other, and the articulated central struts D, pivoted at their upper ends to the bearings B and at their lower ends to the said blocks, said lower ends being normally nearer together, whereby when the slide-blocks recede the keel-bearing is elevated before it is caused to descend by the continued traverse of the slide-blocks, substantially as set forth.

7. In a deck-support for ships' boats, vertically-movable keel-bearings, in combination with side bearings, hinged struts carrying said side bearings, and operative connections between the said keel and side bearings for simultaneously operating the keel-bearings and breaking or folding said struts, substantially as described.

8. A support for boats, comprising a longitudinal shaft having right and left threads, plumber-blocks through which the shaft passes, sliding blocks on the said threads, struts pivoted at their lower ends to said blocks, the keel-bearing pivoted on the upper diverging ends of the struts, the folding side struts carrying side bearings at their upper ends, radius-bars pivoted to the plumber-blocks and to the side bearings, and toggles connecting the screw-operated blocks and in turn connected with the side struts to break or fold the same inward when the screw-operated blocks begin to move from each other and to raise the keel-bearing slightly, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CORNELIS JOHANNES VAN SLUŸS.
CORNELIS STEFFELAAR, JZN.

Witnesses:
N. DRYA, JZN.,
A. S. DOCEN.