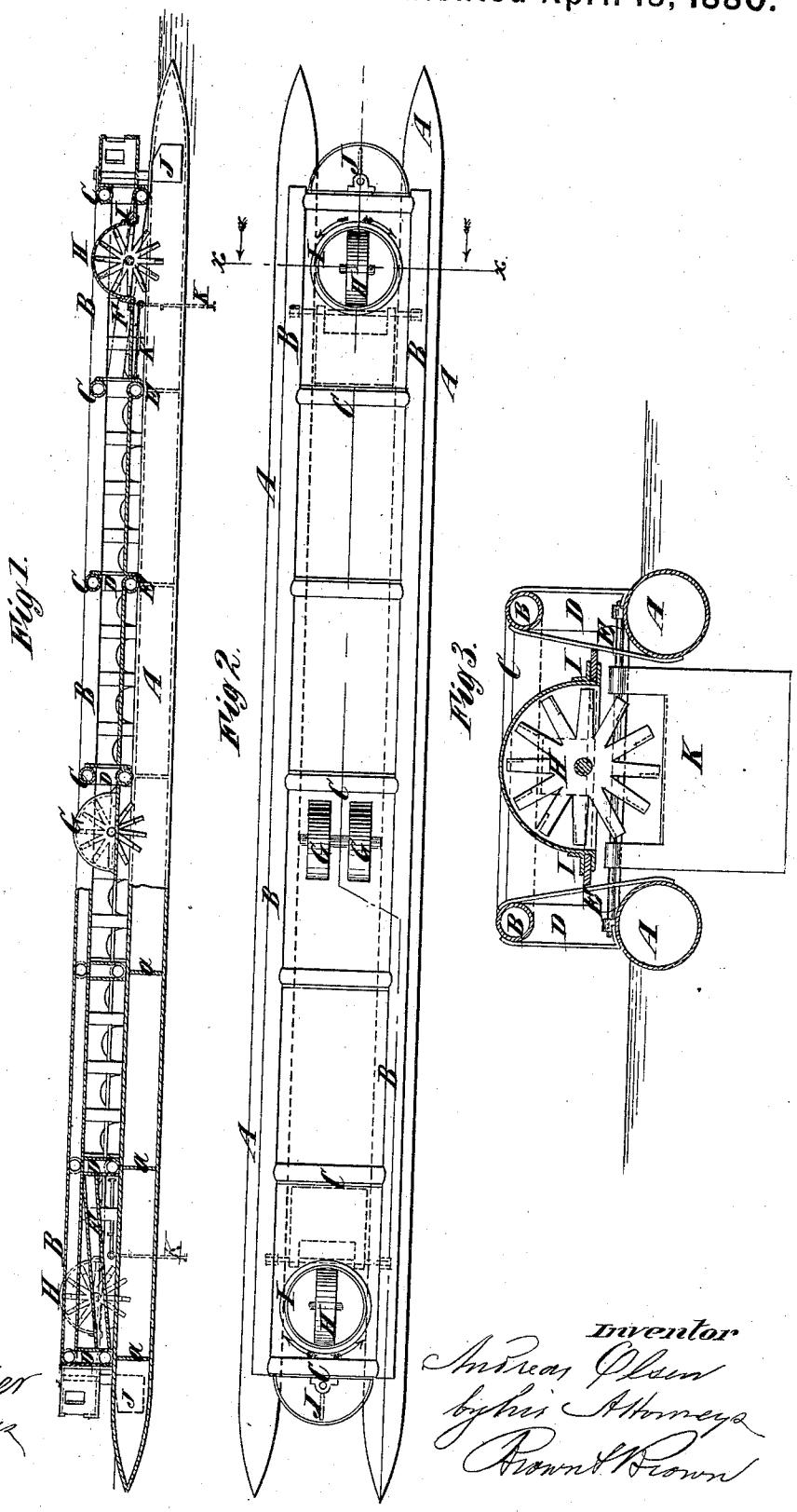
A. OLSEN.

Construction of Steam-Vessels.

No. 226,542. Patented April 13, 1880.



Witnesses

Jotsen Becker

Jno. Haynes

Inventor

Andreas Olsen

by his Attorneys

Brown & Brown

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANDREAS OLSEN, OF EPHRAIM, UTAH TERRITORY.

CONSTRUCTION OF STEAM-VESSELS.

SPECIFICATION forming part of Letters Patent No. 226,542, dated April 13, 1880.

Application filed January 27, 1880.

To all whom it may concern:

Be it known that I, ANDREAS OLSEN, of Ephraim, in the county of San Pete and Territory of Utah, have invented certain new and useful Improvements in Construction of Steam-Vessels, of which the following is a specification.

The object of this invention is to provide a life-preserving hull for sea-going vessels; and the invention consists in two longitudinal tubular pontons sustained parallel to each other at a suitable distance apart by transverse connecting-braces, in combination with struts extending vertically from each ponton, longitudinal air-tight cylinders connected to the upper ends of the vertical posts or struts immediately above and parallel to the pontons, and transverse braces connecting the two cylinders, the structure so formed being adapted to sustain the deck, cabins, &c., of a sea-going vessel, and the arrangement being such that if the posts or struts and upper horizontal cylinders, which mainly support the deck, cabins, &c., should accidentally become detached from the pontons by rough usage said upper cylinders will still subserve the purpose of floating the remaining structure.

In the accompanying drawings, Figure 1 represents an irregular longitudinal section of a vessel embodying my improvements. Fig. 2 represents a plan thereof; and Fig. 3 represents a transverse section, on a larger scale, on the dotted line *x x*, Fig. 2, looking in the direction of the arrows.

Similar letters of reference designate corresponding parts in all the figures.

A designates the main tubes or pontons by which the vessel is supported, and which are here represented as two in number, placed at proper distance apart, one on each side of the vessel. The tubes or pontons A are preferably pointed at each end, so as to facilitate the passage of the vessel through the water, and are also preferably divided by transverse partitions *a* into a series of water-tight compartments, so that if one of said compartments should be penetrated the remainder of the tube or ponton would be kept free from water. This arrangement of compartments adds greatly to the safety of the vessel and renders it almost impossible to sink her.

Arranged parallel with and above said tubes A are other tubes, B, here shown as somewhat smaller in diameter. When connected to the tubes A by vertical braces or framing the tubes A are greatly strengthened to resist any tendency to break or hog transversely, as would be the case in a vessel raised upon the waves and not properly strengthened transversely. The several tubes A and B are inflexibly connected by strong frame-work, which serves to support the cabins, decks, and receptacles for cargo.

In the present instance the main frame-work consists of tubes of smaller diameter. C designates horizontal tubular braces uniting the two tubes B. D designates vertical tubular posts or struts uniting the tubes A and B, and E designates tubular cross-braces between the two series of posts or struts D.

In order to further strengthen the tubes A transversely, I have represented diagonal tubular braces F, extending from the tubes A to the tubes B at each end of the vessel. Upon this tubular frame-work are supported the decks and all the internal frame-work and compartments of the vessel.

In order to provide for propelling the vessel, I have represented it as furnished with four paddle-wheels, of which two, G G, are fixed at or near the center of the vessel, and are adapted to be rotated to drive the vessel ahead. H H designate two other paddle-wheels, which are here shown as arranged one at each end of the vessel. The two paddle-wheels H H have horizontal shafts, which are supported in turn-tables I. These turn-tables are adapted to be turned upon vertical axes, so as to enable the paddle-wheels to revolve in a plane parallel with the length of the vessel, as illustrated in Figs. 1 and 2, or at right angles thereto, as illustrated in Fig. 3, or, if desirable, at any angle between the two positions. The object of thus swiveling the paddle-wheels is to permit the vessel to be propelled in a direction transverse to the run of the waves without turning so as to present the broadside to the action of the waves.

When the turn-tables I I are employed they should be set low enough in a vessel to enable a sufficient portion of the paddle-wheels to be submerged in the water to render their

operation effective, and for this purpose a vessel constructed with pontons is very desirable, as the hull of the vessel is much less in depth at the center, between the pontons, than at the sides.

No mechanism for operating the paddle-wheels is here represented, as it forms no part of my invention, and any suitable mechanism may be employed for this purpose which is modified to permit of the turning of the turn-tables without disengaging the paddle-shafts from their driving mechanism.

J designates rudders, which are arranged at both ends of the vessel for steering it, and which may be in all respects similar to rudders ordinarily employed.

In order to make the ship lay to in case of a storm and to prevent as far as possible the drifting of the vessel in the direction of the run of the waves, I employ what I term "water-anchors," which consist of heavy iron plates K, hinged at the under side of the vessel and extending transversely across the same. When the vessel lays to and it is desired to keep from drifting, the anchor in the end of the vessel heading the run of the waves is let down; but when the vessel is being propelled forward these anchors are swung up and secured in a horizontal position at the under side of the vessel.

I am aware that a life-boat has been arranged upon two longitudinal tubular air-chambers, the sides of the upper part of the boat being provided with air-chambers which, in cross-section, have the form of the segment of a cylinder, and I am also aware that the deck or hull of a vessel has been arranged upon longitudinal parallel pontons; but I am not aware of any sea-going vessel in which the hull embodies in its construction two longitudinal tubular pontons sustained parallel to each other at a suitable distance apart by transverse braces, said pontons having attached to their upper sides a series of vertical posts or struts, to the upper ends of which are attached two longitudinal tubular air-tight cylinders, which are arranged immediately above and parallel to the pontons, and are connected by transverse braces in such manner that if the posts or struts and said cylinders which support the deck, cabins, &c., should become accidentally detached from the pontons by rough usage the said air-tight cylinders will still float the remaining part of the structure.

What I claim as my invention, and desire to secure by Letters Patent, is—

In the hull of a vessel, the two longitudinal tubular pontons A A, sustained parallel to each other at a suitable distance apart by the transverse connecting-braces E, in combination with posts or struts D, extending vertically from each ponton, longitudinal tubular cylinders B, connected to the upper ends of the vertical posts or struts immediately above and parallel to the pontons, and of substantially the same length as the latter, and the transverse braces C, connecting the two cylinders, substantially as shown and described, the said cylinders and posts or struts serving to support and sustain the deck, cabins, &c., of a sea-going vessel, as herein set forth.

ANDREAS OLSEN.

Witnesses:
J. P. CHRISTENSEN,
G. W. SODERBERG.