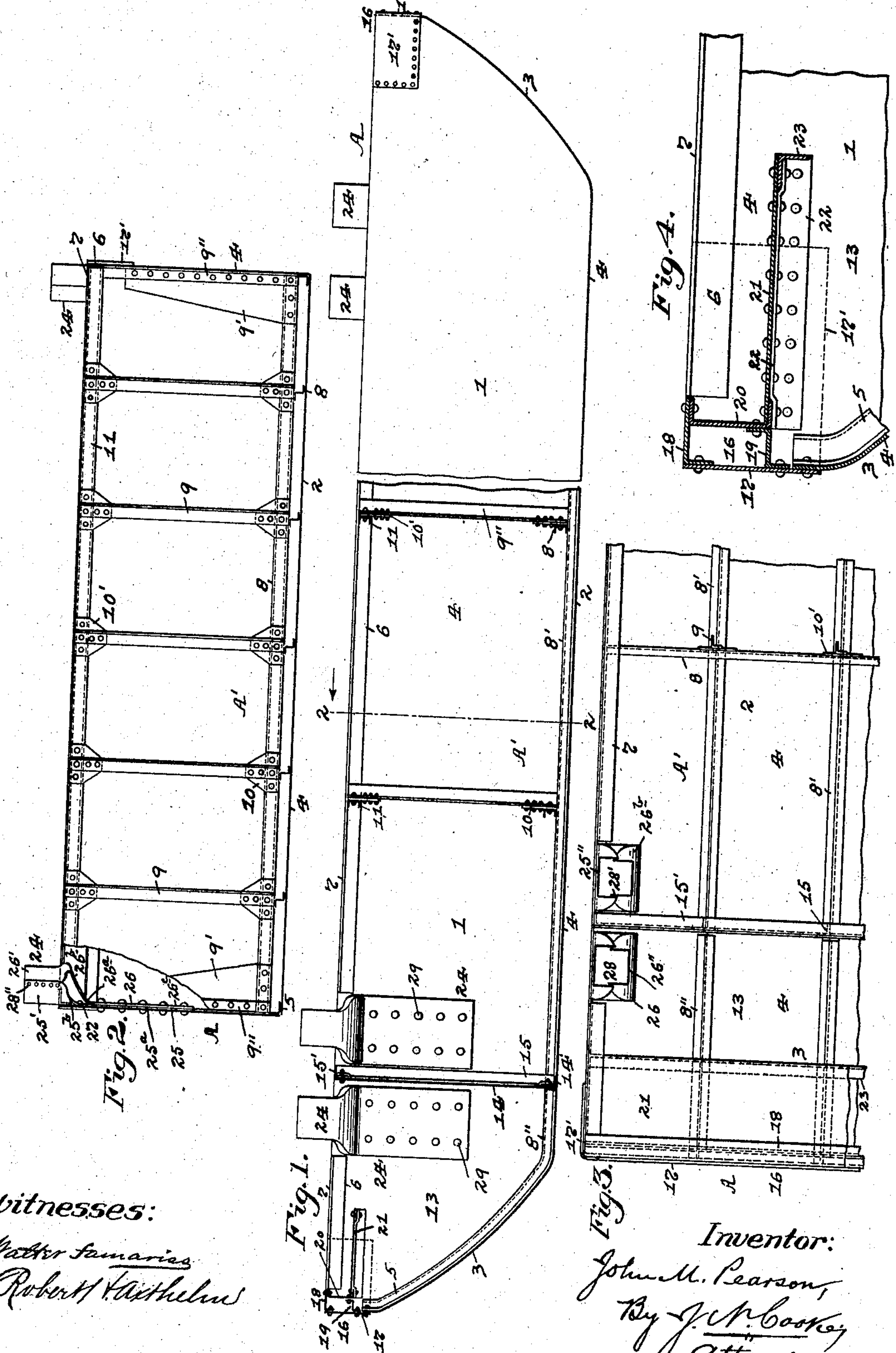


No. 815,551.

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J. M. PEARSON.  
BARGE AND OTHER LIKE VESSEL.

APPLICATION FILED FEB. 16, 1905.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## BARGE AND OTHER LIKE VESSEL.

No. 815,551.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed February 15, 1905. Serial No. 245,685.

*To all whom it may concern:*

Be it known that I, JOHN M. PEARSON, a resident of Bellevue, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Barges and other Like Vessels; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to barges and other like vessels, and has special reference to barges or vessels being formed from sheet metal.

The object of my invention is to form a barge or vessel entirely of sheet metal which will be strong and durable in its construction, will be easily and quickly formed, and will be cheap and easy to manufacture.

My invention consists, generally stated, in the novel arrangement, construction, and combination of parts, as hereinafter more specifically set forth and described, and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved barge or vessel, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of a barge, partly in section, made in accordance with my invention. Fig. 2 is a cross-section of the same on the line 2 2, Fig. 1. Fig. 3 is a top plan view of a portion of one end. Fig. 4 is an enlarged cross-section of the head-log and connecting parts.

Like symbols of reference herein indicate like parts in each of the figures of the drawings.

As illustrated in the drawings, A represents a barge made in accordance with my invention, which has its sides 1, bottom 2, and curved ends 3 formed of metal sheets or plates 4, and such plates 4 are connected or riveted together in any suitable manner to prevent leakage. The sides 1 are connected to the bottom 2 and curved ends 3 by means of the angle-bars 5, which extend along the interior A' of the barge and are riveted to said sides, bottom, and ends, while angle-bars 6 extend along the interior face of said sides 1 and are secured at the top of and to said sides by riveting to form the gunwales 7.

Extending along and riveted to the interior face of the bottom 2 and ends 3 are a series of Z-bars 8' 8'', and a series of channel-bars 8 extend across these bars 8' and are riveted thereto, while such bars 8 can be riveted to said Z-bars 8' and are riveted at their ends to the supporting angle-bars 9'', which extend up along and are riveted to the interior face of the sides 1. These angle-bars 9'' are also riveted to the angle-bars 6, and riveted to these bars 9'' and channel-bars 8 are the side gusset-plates 9', while supporting angle-bars 9 are riveted at their lower ends to gusset-plates 10, and such plates 10 are riveted to said channel-bars 8. The supporting-bars 9 extend up from said bars 8 in a vertical line and are riveted at their upper ends to gusset-plates 10', and such plates are riveted to and depend from a series of supporting channel-bars 11, extending across the interior A' of said barge and at the top of the same, while such channel-bars 11 are riveted at their ends to the angle-bars 6 and to the side-supporting angle-bars 9''.

At each end of the barge A is a chamber 13, which is water-tight and is formed between the division-wall 14, extending across the interior A' of the barge and the curved end 3, such division-wall passing between the Z-bars 8' and 8'' and being formed of plates which are connected or riveted together in any suitable manner. This division plate or wall 14 is riveted at its lower end to an angle-bar 14', extending across and riveted to the bottom 2 of said barge, and is riveted at its side edges to one of the angle-bars 9'', while angle-bars 15 are riveted to the one side face of said division-wall 14 to brace the same, and an angle-bar 15' extends across and is riveted to the top of said wall 14 to support and further brace the same.

Extending across each end 3 of the barge A and at the top of the same within the chamber 13 is the head-log 16, which is hollow and is formed of an outer plate 17, which extends across each end and is bent around the sides 2 to form the corner-bands 17', so as to be riveted to the curved end portion or plate 3', to said side 2, and to an angle-bar 18, extending across the upper end. A Z-bar 19 is riveted to this plate 17 at its lower end, and to



this bar 19 is riveted a channel-bar 20, which extends across said end and is also riveted at each end of the angle-bar 18, while a platform 21, formed of plates connected together, and riveted at each end to angle-bars 22, which in turn are riveted to the sides 1 of said barge. This platform 21 is used as a walk for the operator, while acting also as a stiffener, and it is riveted at one side to an angle-bar 23, which is riveted to said bars 22, and such bars are also riveted to the channel-bars 20 and act with said channel-bars 20 and angle-bars 22 to support said platform.

On each side of the division-walls 14 for forming the chambers 13 are the timber-heads 24, which are hollow and of the construction shown and described in my application, Serial No. 229,082, filed October 9, 1904, each timber-head being formed from two flat sheets or pieces of sheet metal, such as is shown at 25 26 in Fig. 1. The outer or section plate 25 for the timber-heads 24 is pressed by any suitable means to form the flanged portions 25', which extend inwardly from the body portion 25'' thereon and connect with the flat portion 25<sup>a</sup> of said body portion by the angular portions 25<sup>b</sup>. The inner plate or section 26 for such timber-head 13 is also pressed by any suitable means to form the flanged portions 26', which extend inwardly from the body portion 26'' thereof and connect with angular portions 26<sup>b</sup> on said body portion, while curved portions 26<sup>a</sup> connect the angular portions 26<sup>b</sup> with the flat portion 26<sup>c</sup> of said body portion. The timber-heads 24 are connected to the sides 1 of the barge A by first securing the outer section 25 thereto by means of the rivets 27 passing through the flat portion 25<sup>a</sup> and sides 1, and a number of such rivets are placed through these parts and at the top of the same below the angular portions 25<sup>b</sup> on said section in order to securely hold said section and timber-head in position on account of the greatest strain being at such point. After this is accomplished the inner section 26 is placed in position against and within the section 25 by its flanged portions 26' fitting within and lapping against the flanged portions 25' on the section 25 to form the hollow upper end 28, as at 28', so that rivets 28'' can pass through both the flanged portions 25' and 26' at such lapped joint 28, while rivets 29 are passed through the flat portions 25<sup>a</sup> and 26<sup>c</sup> on said sections 25 and 26, respectively, and through said sides 1 in order to secure the two sections together and to hold and secure the same in forming the timber-head to the sides of the barge.

It will thus be seen that the construction of the head-log and gunwale will be such as to render them strong and durable, and they will not be liable to become injured, broken, or displaced, while the construction of the

barge is cheap and simple and does not require being formed of special shapes or plates. The parts can be made of thin and light material in order to make the same easy to bend and form to shape, and when in position it will also be seen that in case of objects striking the bottom of the barge the interior construction of such bottom will allow the buckling or raising of the same to a certain extent and will overcome the breaking or punching of holes in the said bottom.

It will further be obvious that the construction of my improved barge may be applied to what are known as "coal-boats" and other vessels and for other uses and purposes, while various modifications in the construction and design of the various parts of my improved barge may be resorted to without departing from the spirit of my invention or sacrificing any of its advantages.

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

1. A barge having a hollow metallic head-log at each end thereof, said head-log being formed of an outer plate and inner bar connected together by bars.

2. A barge having a hollow metallic head-log at each end thereof, said head-log being formed of an outer plate and an inner channel-bar and being connected together by an angle-bar at the upper end and a Z-bar at the lower end.

3. A barge having a hollow metallic head-log at each end and between the sides thereof, said head-log being formed of an outer plate and an inner bar connected together by bars, bars secured to said sides, and a platform connected to the said inner bar and to said side bars.

4. A barge having a hollow metallic head-log at each end and between the sides thereof, said head-log being formed of an outer plate and an inner bar connected together by bars, bars secured to said sides, a cross-bar extending across and secured to said side bars, and a platform connected to said inner bar, side bars and cross-bar.

5. A barge having a hollow metallic head-log at each end and between the sides thereof, said head-log being formed on an outer plate and an inner bar or plate connected together and said outer bar being bent around the sides of said barge to form corner-bands.

6. In a metallic barge, the combination with the bottom and sides, of a series of bars extending longitudinally of and secured to said bottom, cross-bars extending across the upper end of said barge and secured to said sides, vertical bars connected to said cross-bars, and a series of bars extending across said barge and connected to said first-named bars and said vertical bars to raise and support the same above said bottom.

7. In a metallic barge, the combination



with the bottom and sides, of a series of **Z**-  
bars extending longitudinally of and secured  
to said bottom, cross-bars extending across  
the upper end of said barge and secured to  
5 said sides, vertical bars connected to said  
cross-bars by gusset-plates, and a series of  
angle-bars extending across said barge and  
connected to said **Z**-bars and to said vertical

bars by gusset-plates to raise and support  
said angle-bars above said bottom. 10

In testimony whereof I, the said JOHN M.  
PEARSON, have hereunto set my hand.

JOHN M. PEARSON.

Witnesses:

J. N. COOKE,  
ROBERT H. AXTHELM.