

(No Model.)

A. L. SHEARS.

BOAT.

No. 395,458.

Patented Jan. 1, 1889.

Fig. 1.

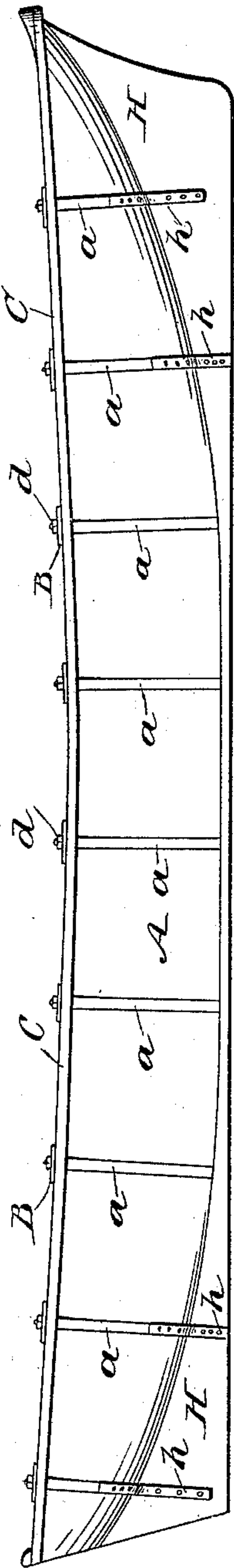


Fig. 2.

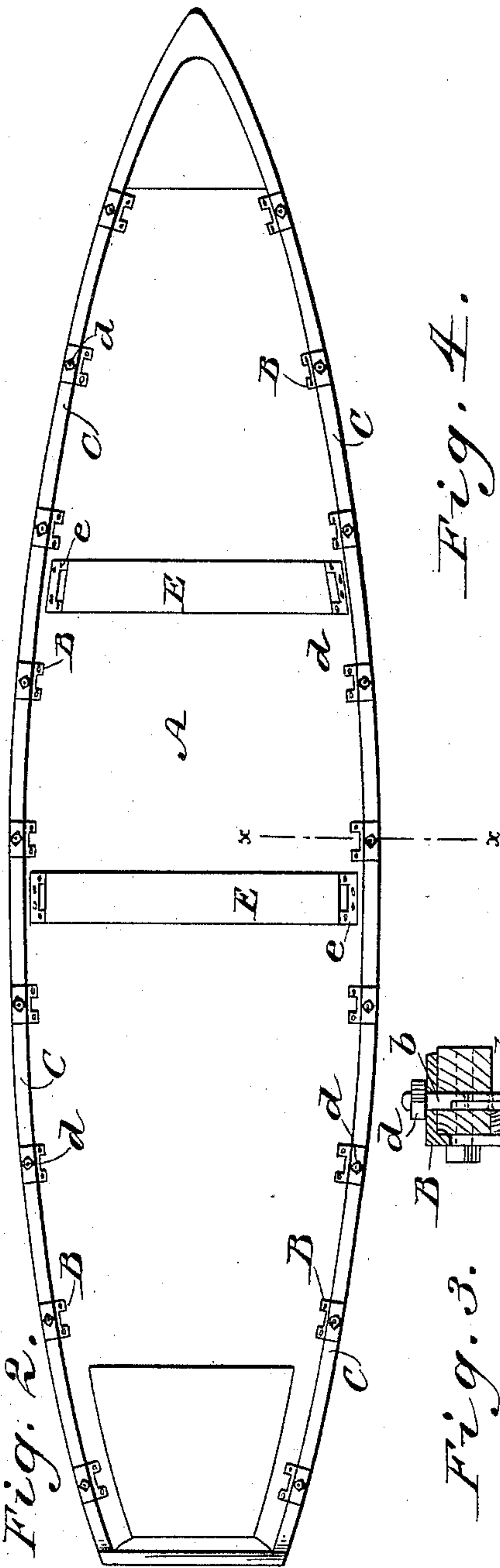


Fig. 4.

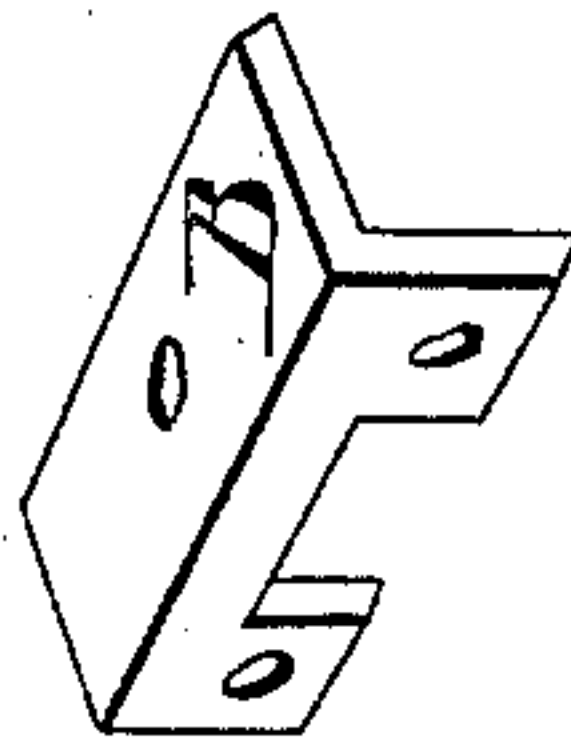
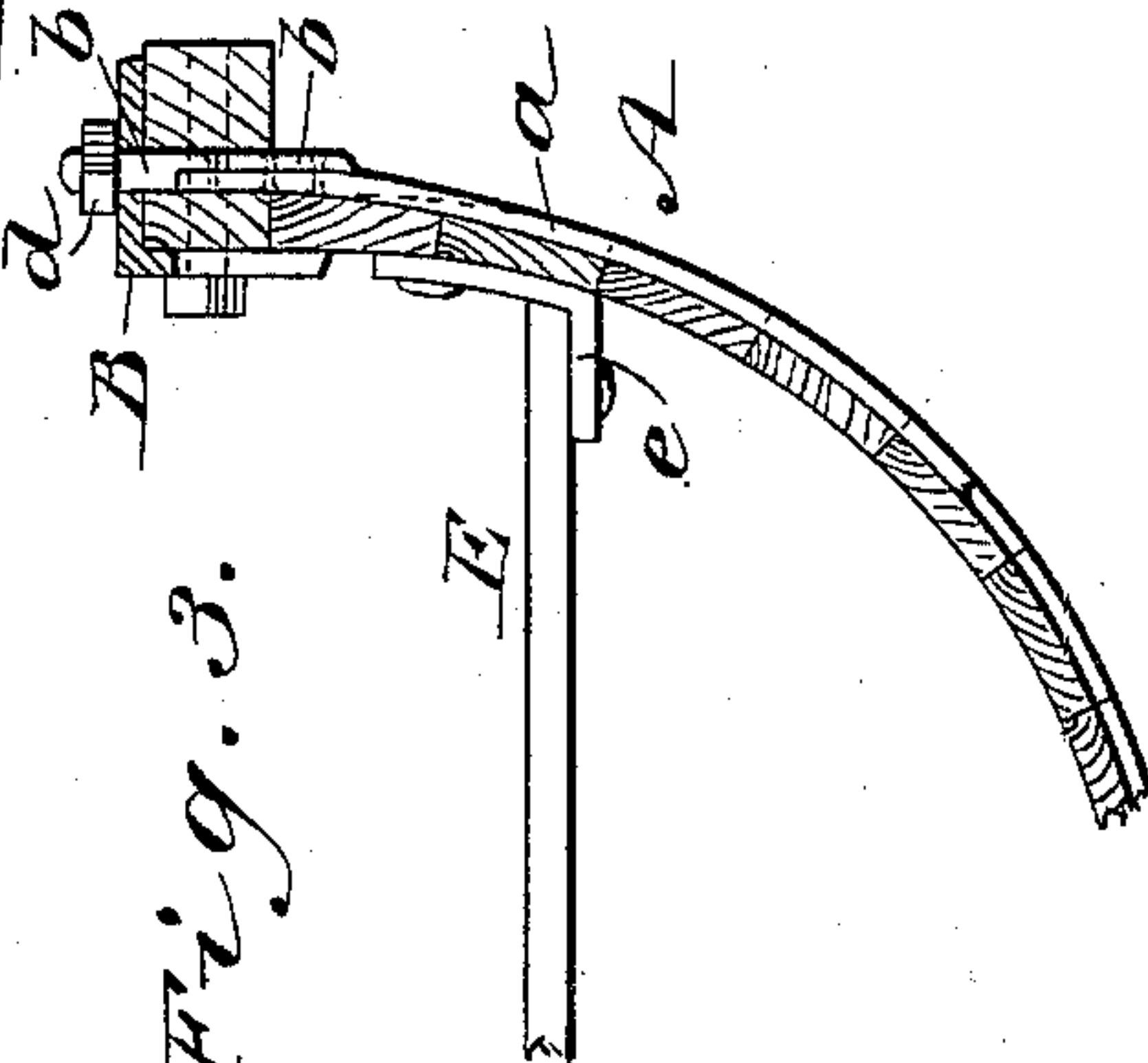


Fig. 3.



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ALBERT L. SHEARS, OF ST. LOUIS, MICHIGAN, ASSIGNOR TO HIMSELF AND
WILLIAM S. TURK, OF SAME PLACE.

BOAT.

SPECIFICATION forming part of Letters Patent No. 395,458, dated January 1, 1889.

Application filed October 11, 1886. Renewed October 27, 1887. Again renewed May 17, 1888. Serial No. 274,198. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. SHEARS, of St. Louis, in the county of Gratiot and State of Michigan, have invented a new and useful
5 Improvement in Boats, of which the following is a full, clear, and exact description.

My invention relates to an improvement in the construction of boats, and has for its object to produce a water-tight boat wherein
10 the ordinary braces or ribs and the tedious process of calking the seams are dispensed with, and wherein, further, the keel is made detachable and the seats removably supported upon angular brackets secured to the gun-
15 wales.

The invention consists in the construction and combination of the several parts, as will be hereinafter set forth, and pointed out in the claims.

20 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improved
25 boat, and Fig. 2 is a plan view thereof. Fig. 3 is a partial transverse vertical section on the line *xx* in Fig. 2, and Fig. 4 is a perspective view of an apertured plate used in the construction of the boat.

30 In the construction of my improved boat I employ a form of proper length and width, and proceed to bend the planking longitudinally thereon, attaching the same to each other and to the stern-plate and bow-piece until
35 the complete frame of the boat A is produced. The said frame is then planed and rubbed down upon the outer side to form a smooth surface.

It will be seen from the above that the usual
40 series of ribs ordinarily employed are not included in my construction, as to strengthen and brace the boat I use a series of transverse metallic straps, *a*. The metallic straps *a*, which may be of any desired width and thick-
45 ness, are adapted to enter channels or grooves cut in the hull transversely the outer surface thereof at intervals from stem to stern, the depth and width of said grooves corresponding to the equivalent dimensions of the said
50 metallic straps used, in order that when the straps are positioned the sides of the craft are

made to present a continuous unbroken and even surface to the water.

Each metallic strap *a* is provided with a screw-bolt, *b*, riveted to the ends thereof, 55 adapted to extend upward through an aperture in the gunwale C of the boat, as shown in Fig. 3, which gunwale C is adapted to receive the horizontal arm of apertured angular plates B, whose vertical arms are secured to 60 the side of the boat below the gunwale, to the gunwale itself, or to both, in any approved manner. The said plate is shown in perspective in Fig. 4.

The number of plates B employed is regu- 65 lated by the number of metallic straps used. The said plates, while they impart additional rigidity to the frame, are specially adapted to receive the attached screw-bolts *b* of the straps *a*, and to that end the said plates are provided 70 with a central aperture in their horizontal arms registering with the aforesaid aperture in the gunwale.

The bolts *b* being entered through the plates B upon each side, nuts *d* are screwed thereon 75 down to a bearing upon said plates, until the said straps have been drawn sufficiently taut. The planking is thus forced together until a seam is hardly visible, rendering the ordinary process of calking unnecessary. 80 Should the planking shrink, the nuts are readily turned farther down by means of an ordinary wrench and the boat made perfectly water-tight. The inner side of the boat is left perfectly clean, with the exception of the 85 ordinary keelson and seats E, the said seats E being supported upon angular brackets *e*, attached to the sides below the gunwale and a proper height above the keelson, by means of bolts entering from the under side of the 90 brackets. The seats are by this means easily removed when desired.

In attaching the keel H to my boat I secure the same in position through the metal plates *h*, which are riveted upon each side to 95 the lower portion of the straps *a* and to the keel, rendering the said keel detachable, which is a great advantage in the event of necessary repairs thereto.

From the foregoing description, taken in 100 connection with the drawings hereto annexed, the operation of the invention will be under-

stood, and it will be also understood that my construction is equally applicable to large as well as small vessels.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method of constructing a vessel, which consists in first bending the planking over a form, then securing the ends of the planking at the stem and stern, and finally passing transverse bands around the structure from the gunwale and adjusting the bands to draw the longitudinal edges of the planking together, the said bands then serving as permanent braces, substantially as set forth.

2. The combination, with the planking or frame of a vessel, of outer transverse adjustable braces secured at their ends to the gunwale, whereby the longitudinal edges of the planking may be drawn together by adjusting said bands, substantially as set forth.

3. The combination, with a vessel, of outer transverse braces passed around the hull and having threaded ends extending up through the gunwale, and nuts thereon for drawing the edges of the planking together, substantially as set forth.

4. The combination, with a vessel and the angle-irons B, secured to the gunwale thereof, and having vertical apertures, of the outer braces passed around the hull and having their ends formed or provided with bolts extending through the vertical apertures in the angle-plates, and tightening-nuts on the threaded ends of the bolts, by tightening which the longitudinal edges of the planking may be drawn together, substantially as set forth.

5. The combination, with a vessel having outer transverse grooves therein, of the adjustable braces extending through or within said grooves and secured at their ends to the gunwale, substantially as set forth.

6. The combination, with a vessel having removable outer clamping-bands, of a keel having straps or securing devices connected with said clamping-bands, whereby the bands and keel may be removed together for repair, substantially as set forth.

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Witnesses:

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