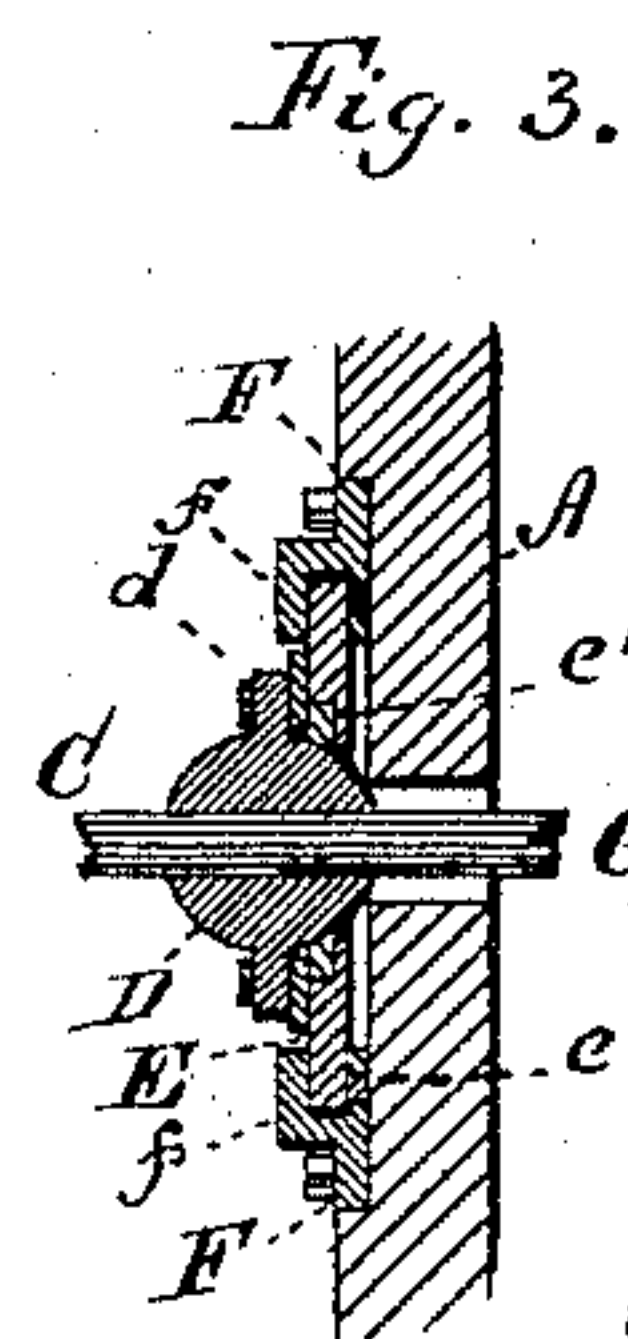
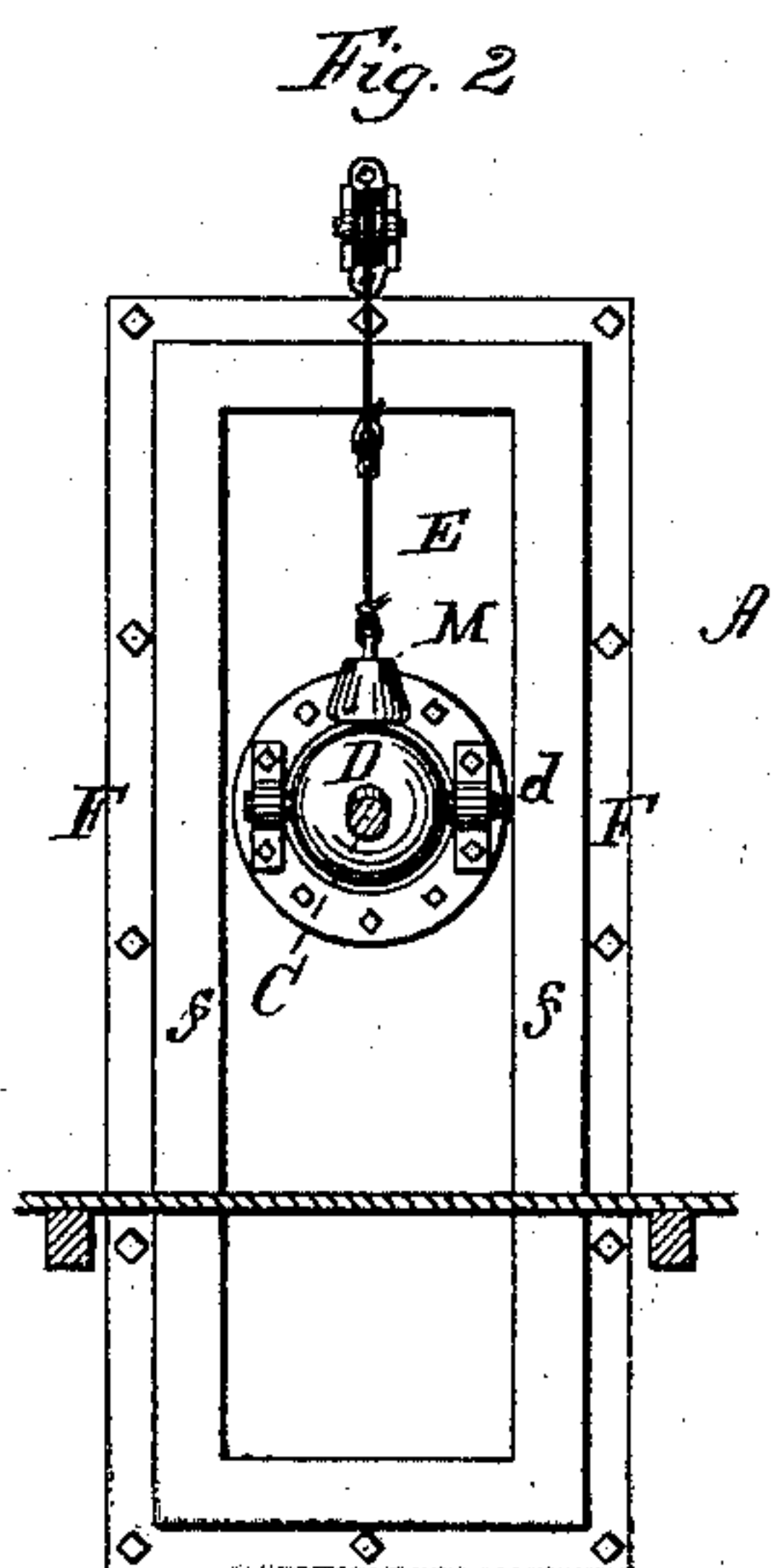
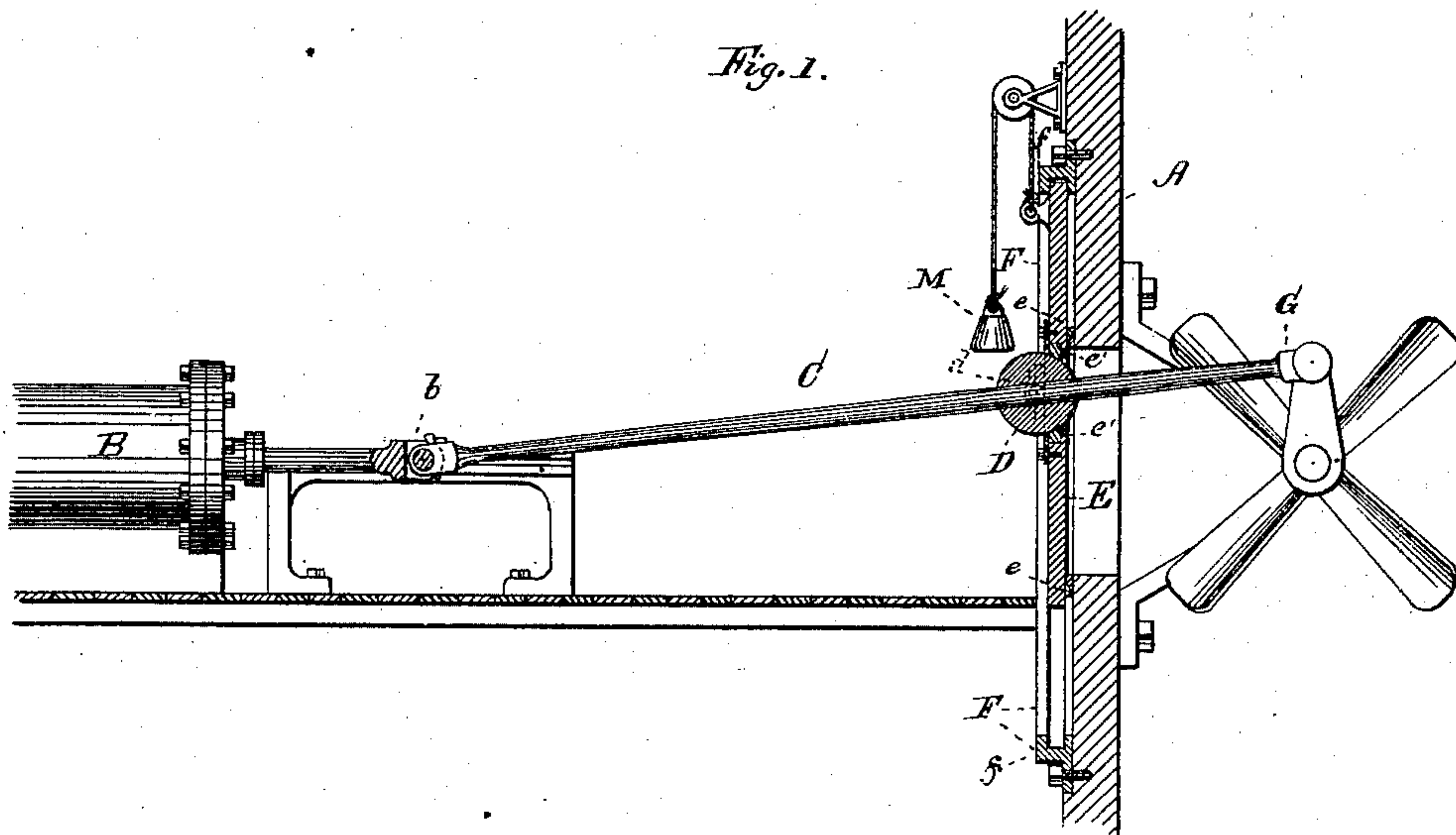


F. H. LAUTEN.  
Stuffing-Box for Propeller-Shafts.

No. 198,030.

Patented Dec. 11, 1877



WITNESSES :

*Herm. Lauten*

*John C. Schroeder*

INVENTOR :

*Frank H. Lauten*

*per Herm. Lauten*

*his atty.*

# UNITED STATES PATENT OFFICE.

FRANK H. LAUTEN, OF NEW YORK, N. Y.

## IMPROVEMENT IN STUFFING-BOXES FOR PROPELLER-SHAFTS.

Specification forming part of Letters Patent No. **198,030**, dated December 11, 1877; application filed November 3, 1877.

*To all whom it may concern:*

Be it known that I, FRANK H. LAUTEN, of the city, county, and State of New York, have invented certain new and useful Improvements in Casing of Connecting-Rods for Propellers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to enable the connecting-rod to be directly attached to the propeller-shaft exteriorly to the hull of the vessel, allowing said shaft freely to vibrate, and making the opening through which it passes water-tight.

The invention is particularly applicable to propellers arranged at the sides of a vessel, and where two or more are employed.

Figure 1 is a vertical section, Fig. 2 an elevation, and Fig. 3 a horizontal section, illustrating the same.

In the drawings, A is a portion of the hull of a vessel; B, a steam-cylinder; *b*, the head of the piston-rod, or a cross-head, to which is attached the connecting-rod C, passing through the globular casing or valve D, which is provided with trunnions *d*, resting in bearings in the plate or box E. The exterior surface of the plate E is made perfectly true and smooth, to correspond with the inner surface of the friction-plates F F let into or firmly secured to the hull A, packings *e e'* being interposed between E and F F. The plates F F have turned-over flanges *f f*, or these are made separate and firmly secured to F F. They serve as guides to the plate E, and to keep it in contact with the packing *e e*, to prevent the entrance of water. G is the propeller crank-shaft, exterior to the hull.

The opening or seat for the valve D and the valve itself are provided with suitable packing to prevent the entrance of water.

The reciprocating movement of the piston, through the medium of the ball D, causes a corresponding reciprocation of the plate or box E, which follows the movement of the outer end of the connecting-rod, keeping the opening necessary to allow sufficient play to said rod constantly closed, and preventing water from entering the vessel.

The plate or box E, the weight of which is neutralized by the counterpoise M, constitutes, in fact, a movable part of the shell of the vessel, and may be considered as constituting a portion of the hull.

It is obvious that the details herein shown and described may be variously modified without departing from the general principle of my invention, which consists in closing the opening necessary for the connecting-rod or equivalent by means of a sliding device, constituting essentially a part of the hull.

I claim as my invention—

1. The movable section of the shell or hull of a vessel reciprocating against or within the main frame of the hull, in combination with the pitman-rod C or its equivalent, substantially as and for the purpose specified.

2. The combination and arrangement of the pitman C with the sliding plate E, whereby the gate is raised and lowered at each revolution of the crank, substantially as specified.

3. The combination and arrangement of pitman C, ball-casing D, and sliding plate or box E, substantially as described.

4. The combination and arrangement of connecting-rod C, ball-casing D, sliding plate or box E, plate or plates F F, and crank-shaft G, in connection with the hull or framing of a vessel, substantially as and for the purpose specified.

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

FRANK H. LAUTEN.

Witnesses:

HUGO KOELKER,  
JOHN MCMAHON.