

L. GODDU.

Armor-Clad Vessels.

No. 136,055. Patented Feb. 18, 1873.

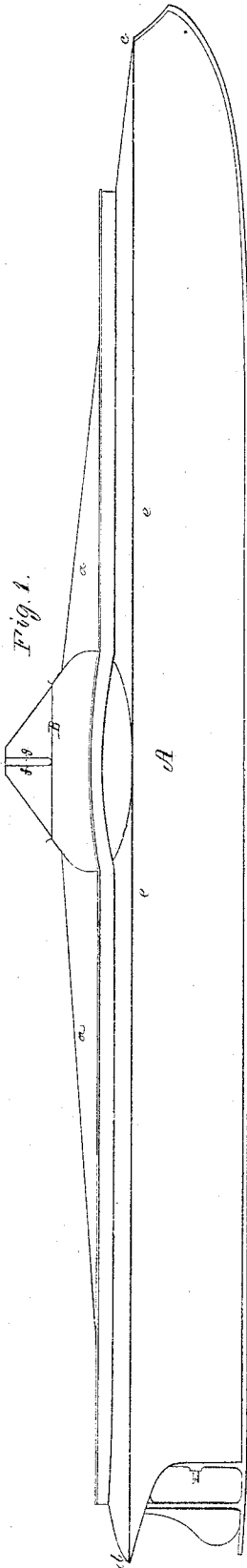


Fig. 1.

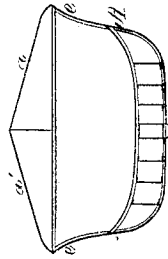


Fig. 2.

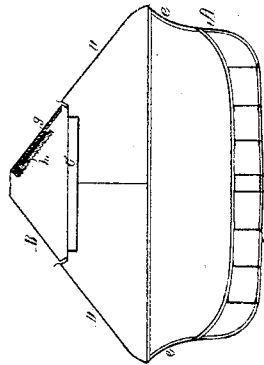


Fig. 3.

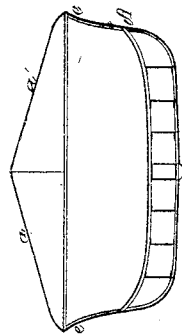


Fig. 4.

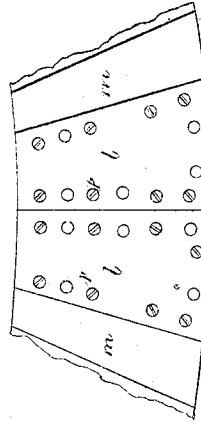


Fig. 5.

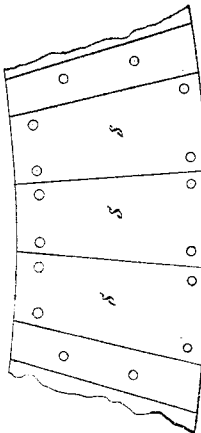
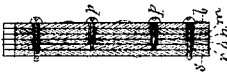


Fig. 6.



Witnesses.

S. W. Piper

L. A. Miller

Louis Goddu.

by his attorney.

R. H. Gray

UNITED STATES PATENT OFFICE.

LOUIS GODDU, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ARMOR-CLAD VESSELS.

Specification forming part of Letters Patent No. 136,055, dated February 18, 1873.

To all whom it may concern:

Be it known that I, LOUIS GODDU, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in that class of naval vessels usually termed Monitors; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawing, of which—

Figure 1 is a side elevation; Fig. 2, a medial transverse section of a monitor embodying my invention. Fig. 3 is a transverse section taken midway between the turret and stern. Fig. 4 is a similar section taken midway between the turret and the bow.

In making my invention I have endeavored to produce a vessel or monitor, whose entire surface exposed or to be exposed to the shot of an enemy while the vessel may be in action shall be a deflection of such shot. To accomplish this I employ a tapering or conical turret or roof to the gun room or chamber, and such a conical or tapering deflecting glacis extended in opposite ways from a gun room or chamber arranged below the turret or roof. The deck is sloped upward in opposite directions to its longitudinal medial line, where it also slopes downward from the turret or glacis to the bow and to the stern. The walls of the monitor also are curved or shaped so as to deflect shot downward into the water. The bow and the stern are also deflective or curved.

In the drawing, the hull is shown at A, and the conical rotary turret or turret-roof is exhibited at B, the gun-room C being a cylindrical or other proper-shaped chamber beneath the turret, and provided with a conical glacis or slope, D, encompassing it and extending down to the sides of the hull at its middle, as shown. The double-deflecting deck is shown with slopes *a a'* extending upward from the sides to the medial longitudinal plane of the hull, the crown of the deck being sloped in opposite directions from the turret base or glacis to the bow *c* and stern *d*, the latter being also curved, as shown. The deflecting-wales are represented at *e e*, it being intended that the monitor, when prepared for action, shall have its plane of flotation at or

a little above the base of the deck. The turret or its rotary conical roof may be perforated with one or more port-holes, *f*, each to be provided with a closing slide or port, *g*, arranged as shown. A toothed rack, *h*, extending from such slide, in manner as represented, may be used with a pinion to effect the requisite longitudinal movements of the slide.

Fig. 5 is a front view; Fig. 6, a rear view; and Fig. 7, a longitudinal section of the mode of constructing the turret or the armor thereof and such parts of the vessel as are required to be armored.

The armor is composed, first, of two layers of metallic plates, *l l m m*, one layer of which is laid on so as to break joints with the other, the whole being secured together by rivets. Next outside of these plates is an elastic sheathing, *n*, which may be of vulcanized rubber or gutta-percha or other suitable elastic material. Next, the said sheathing is to be covered by a course of metallic plates, *o*, secured to the first and second course by screws *p* going through them and the elastic course, and being screwed into the covering-course *o*. On this covering-course another elastic sheathing, *r*, is to be arranged to be in turn covered by metallic plates *s*, held to all the courses by screws, the heads of all the screws being on the inner side of the armor.

This mode of constructing the armor insures an elasticity to it which operates to prevent it from being broken when struck by a projectile. Besides it prevents the connections from being driven out of the armor to the injury of persons when in the turret.

The gun-room may be fixed to the turret so as to revolve with it, or the gun-room may be stationary relatively to the turret, and be provided with means of supporting the gun or guns, and enabling such to revolve with the turret.

A monitor so constructed will generally have greater room below the deck than one having a flat deck. Its turret by being conical instead of cylindrical will be less liable to be perforated by the shot of an enemy, and being deflective can be made lighter than a cylindrical one. Its conical glacis and pecul-

ially-sloped deck are not only defective of shot or shell but readily discharge water when thrown upon them.

What I claim as my invention is as follows, viz:

In an armored vessel, constructed substantially as described, the revolving turret, constituting the apex of a cone, of which the frustum forms the highest part of the deck,

and extends down to the guards of the vessel, so that the vessel may be partially submerged and thereby leave only the conical turret and a small part of the frustum, on which it is seated, exposed to the enemy's shot.

LOUIS GODDU.

Witnesses:

R. H. EDDY,
J. R. SNOW.