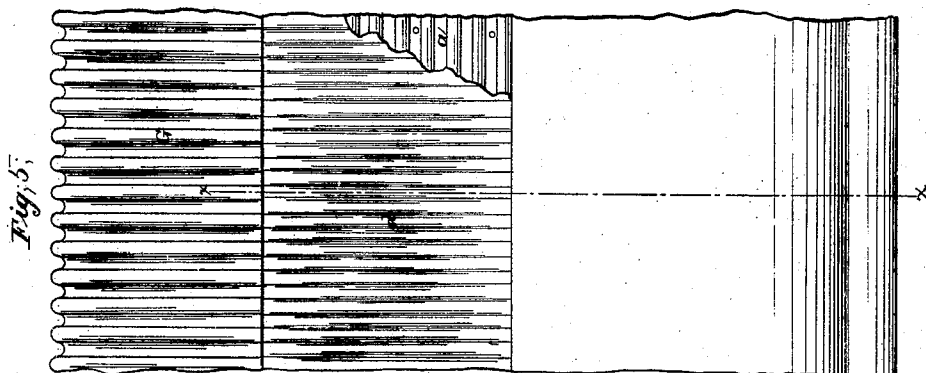
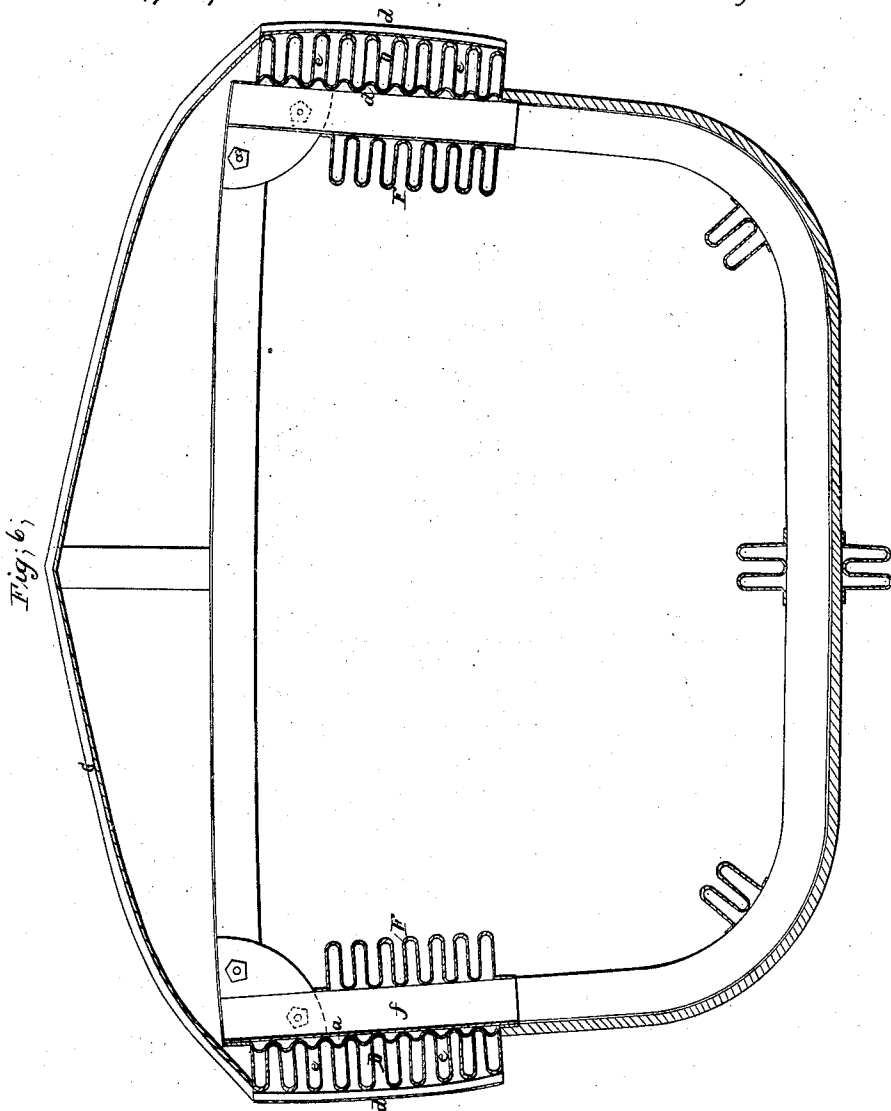


R. Montgomery Sheet, 2, Sheets
Armor Clad.

N^o 34,727.

Patented Mar. 18, 1862.



Witnesses;
H. J. Montgomery
J. B. Woodruff

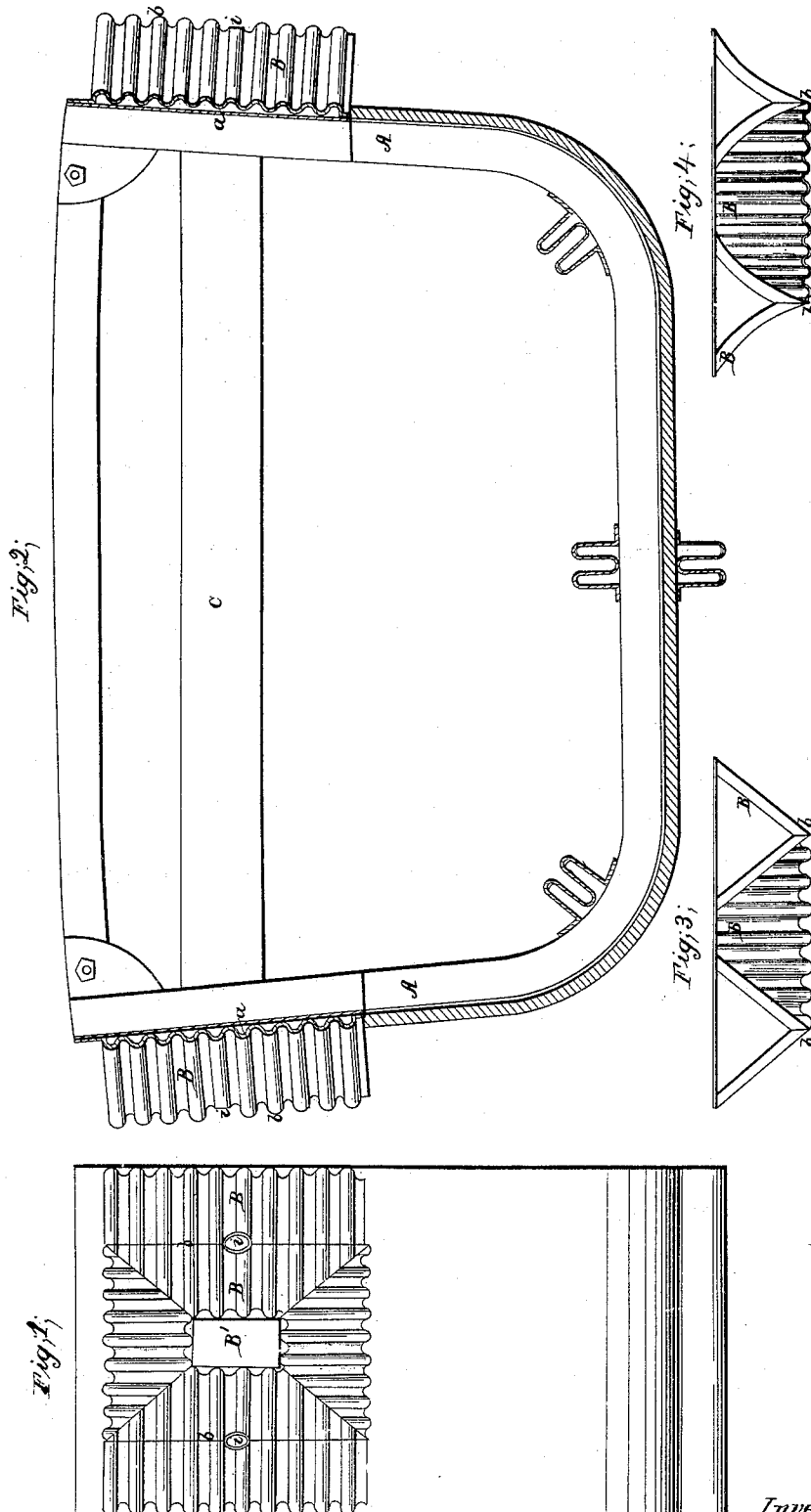
Inventor;
Richard Montgomery

R. Montgomery. *Sheet 2, 2 Sheets.*

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Witnesses;

A. J. Montgomery,
J. W. Woodruff

Inventor;

Richard Montgomery

UNITED STATES PATENT OFFICE.

RICHARD MONTGOMERY, OF NEW YORK, N. Y.

IMPROVED IRON-CLAD VESSELS.

Specification forming part of Letters Patent No. 34,727, dated March 18, 1862.

To all whom it may concern:

Be it known that I, RICHARD MONTGOMERY, of the city, county, and State of New York, have invented certain new and useful Improvements in Naval Architecture, called the Montgomery Corrugated Iron-Clad War-Vessel; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification.

On Plate No. 1, Figure 1 represents a section of the broadside of a war-ship or gunboat having a series of angulated recesses, with port-holes and openings for projectiles to pass through the vessel. Fig. 2 shows a cross-section through the war-vessel, the angulated sides, and the hollow conductor, which also make the beams for supporting the gun-deck. Fig. 3 is a detached view of one section of the angulated sides or funnel to glance the projectiles. Fig. 4 shows another section of the funnel with sharp projecting angles and curved sides.

On Plate No. 2, Fig. 5 represents a section of the broadside of a vessel coated above the water-line with a series of corrugated plates transversely fixed and secured to the frame of the vessel both inside and outside. Fig. 6 shows a cross-section through a gunboat, the deck-beams, and corrugated arch-covering, and an end view of the laminated plates.

The nature of my invention consists in giving additional and great strength and security to the sides of vessels for war purposes by securing to the sides of war-vessels above the water-line a series of angulated recesses, by which projectiles may be glanced into an opening and pass through the vessel or be brought to spend their force against that portion supported by the ends of the beams which extend across and support the gun-deck.

To enable others skilled in the art to make, apply, and use my invention, I will proceed to describe it and its adaptation more fully, referring to the drawings, and to the letters of reference marked thereon.

The letters indicate the same parts in all of the several figures.

Plate No. 1 shows the angulated mode of strengthening and protecting the sides of war-vessels and parrying of the blows.

Plate No. 2 shows the manner of giving suf-

ficient strength to resist the force of any ordinary projectile upon the broadside to the corrugated ribs A, which constitute the frame of the hull. I firmly secure the sheathing of corrugated metal *aa*, which runs around and forms a strong and durable covering for the hulls of vessels and is of itself sufficiently strong to resist the action of the winds and waves of the most violent storms; but for war purposes I firmly secure to the sides or the covering *aa* a coat of mail consisting of laminated and corrugated iron, arranged and applied in the modes hereinafter fully described.

The figures on Plate No. 1 show the mode of constructing the shield by a series of angulated recesses B, which are firmly fastened to and extend entirely around the hull of the vessel, leaving sharp projecting edges *bb* alternately with the recesses B, corresponding with the ends of hollow tubes C, which answer the purpose of beams to support the gun-deck and brace the sides of the vessel, they being open on both sides, so that projectiles entering may pass through or in place of the tubes or hollow beams C there may be solid beams of iron or timber, so that the force of a projectile striking will be glanced into the recess and spend its force upon the spot or place on the sides of the vessel thus supported, which will be equivalent, or nearly so, to a solid mass of many feet in thickness. In each of the sharp angles *bb*, or in as many as may be desired, I make port-holes *ii* for cannon, which are completely casemated by the angulated covering B B, the guns and gunners being very little exposed to the fire from the enemy. The projectile will be parried off and be found to be comparatively harmless.

On Plate No. 2, Figs. 5 and 6, is my other mode of shielding vessels and gunboats from being greatly damaged by projectiles. To the corrugated covering *aa* and frame A, I secure horizontally and extending entirely from the bow to the stern a shield of laminated plates D D, the layers being vertical and of sufficient width to resist almost any force that could be brought to bear against them on the outside, and over the laminated plates D D are bolted plates of metal *dd*, which may be either corrugated or plain. These plates *dd*, which form the outer covering, may be put on so as to be water-tight. There may be placed transversely between the ribs or frame

A A a series of laminated plates *ff*, and again across the inside may be another series of laminated plates F F, placed longitudinally, so that resistance may be had to almost any force that can be brought to bear against it.

To cover and protect the decks of gunboats, I form an ellipsis or arch of corrugated or plain metal G to glance off the shot or shell and otherwise protect the craft.

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

1. The angulated recesses in connection with the openings and hollow beams by which the missile can be directed and conveyed across the ship, substantially as described.

2. In combination with the recesses, the supporting solid beams placed and operating in the manner as described, and for the purposes herein set forth.

RICHARD MONTGOMERY.

Witnesses:

M. J. MONTGOMERY,
J. B. WOODRUFF.