

A. B. Cooley. Sheet 1, of 2 Sheets
Armor Clad.

No. 34,807.

Patented Apr. 1, 1862.

Fig. 1.

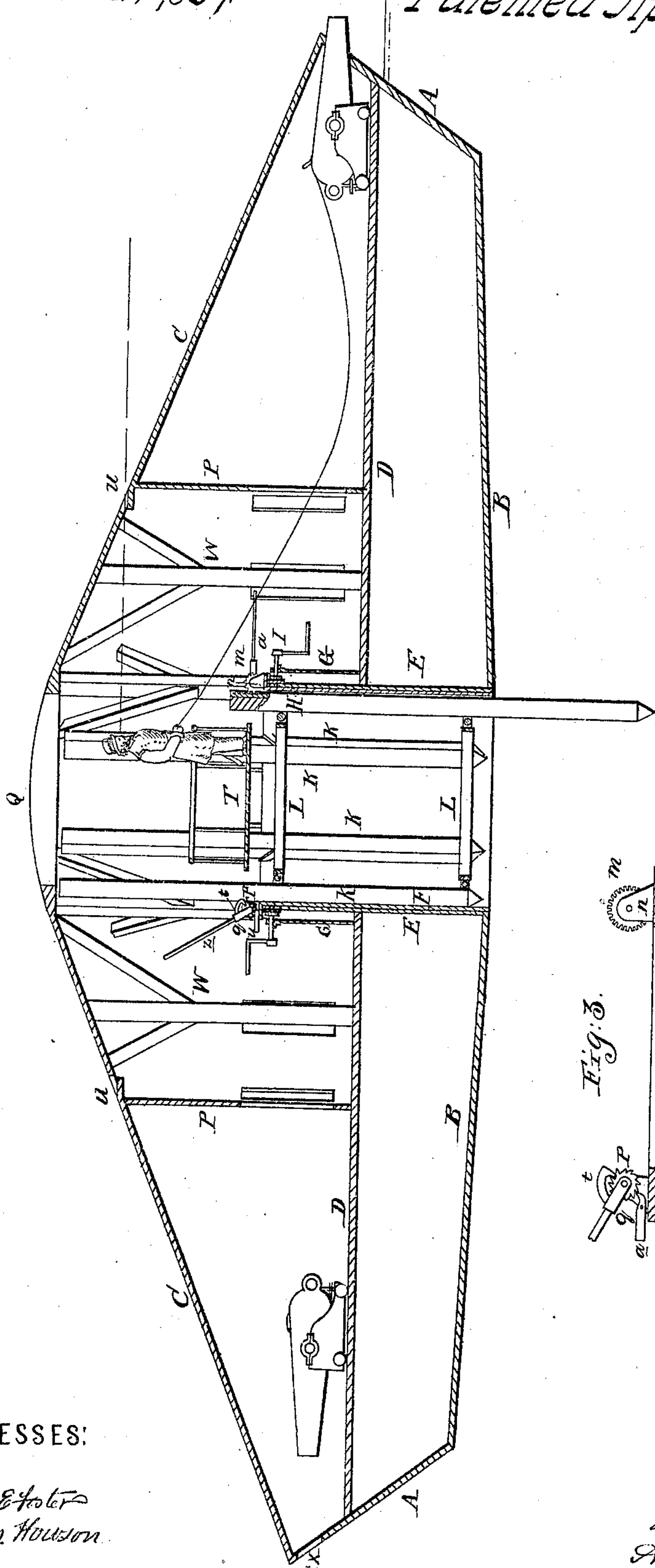
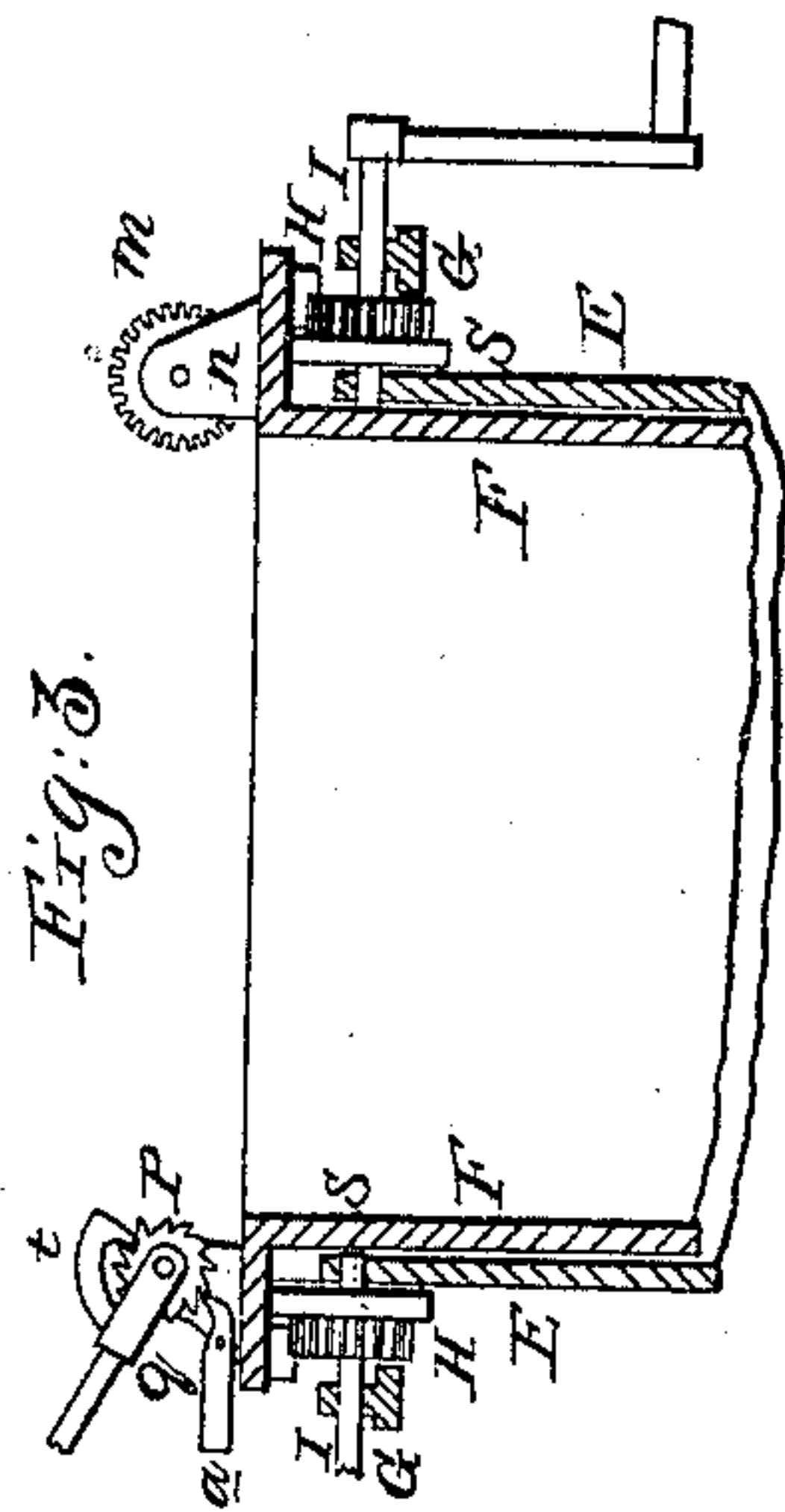


Fig. 3.



WITNESSES:

Charles E. Foster
Charles Houston

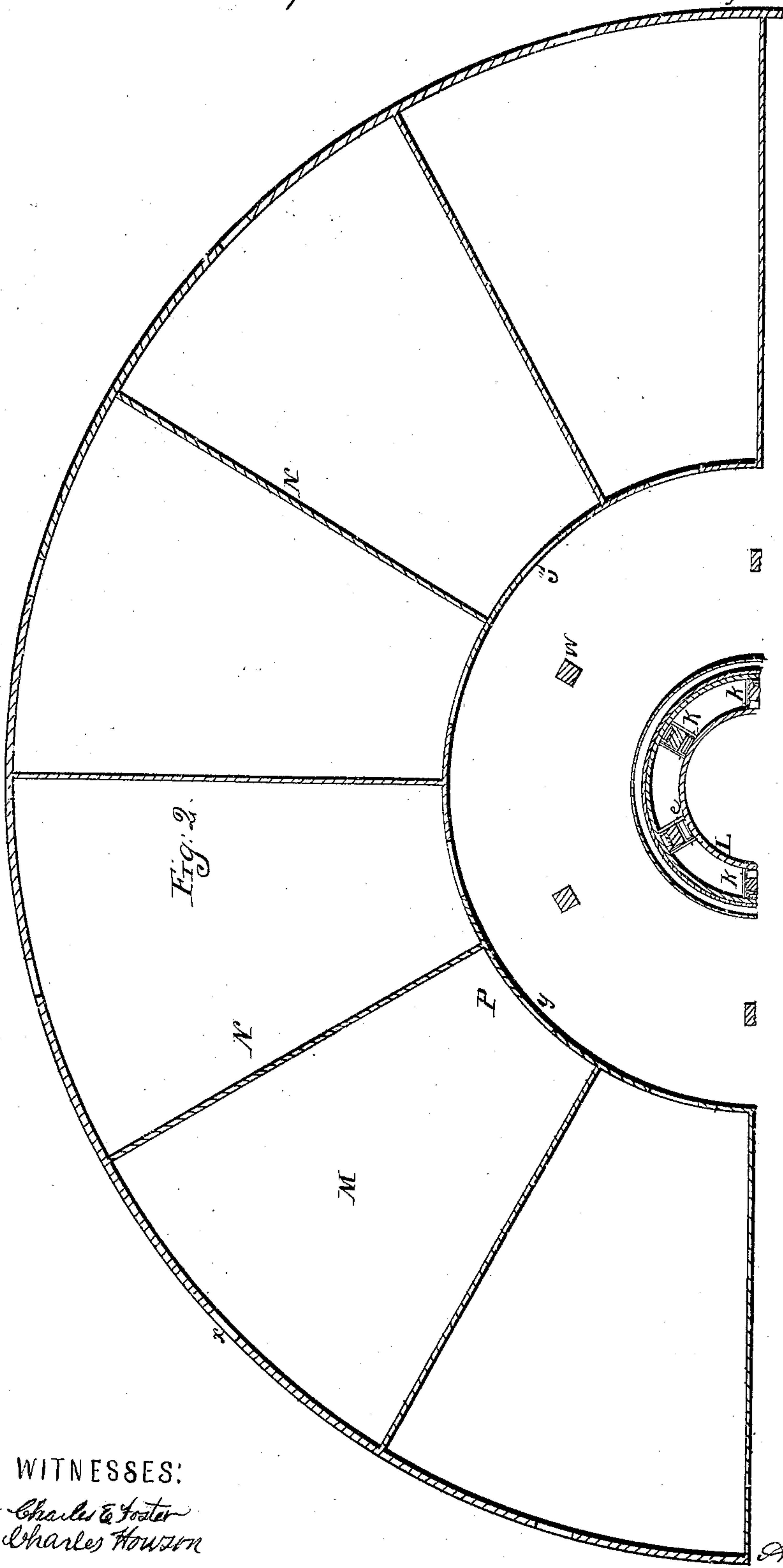
INVENTOR:

Henry Howson
Atty for A. B. Cooley

A. B. Cooley *Sheet 2, 2 Sheets*
Armor Clad.

No 34,867.

Patented Apr 1, 1862.



WITNESSES:
Charles E. Foster
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INVENTOR:
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UNITED STATES PATENT OFFICE.

A. B. COOLEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED FLOATING BATTERY.

Specification forming part of Letters Patent No. 34,867, dated April 1, 1862.

To all whom it may concern:

Be it known that I, A. B. COOLEY, of Philadelphia, Pennsylvania, have invented an Improvement in Floating Batteries; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of mechanism, fully described hereinafter, for anchoring and revolving a circular shot-proof floating battery.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of my improved floating battery; Fig. 2, a sectional plan, and Fig. 3 a detached sectional view of part of Fig. 1.

The outer casing or shell of the battery is of a circular form, and consists of the inclined sides A, the bottom B, and the inclined roof C, D being the deck, beneath which is the hold for containing the accommodations for the crew, ammunition, stores, &c.

In the center of the shell or outer casing is a hollow cylinder E, which is secured to or forms a part of the bottom B, and within this cylinder another hollow cylinder F fits snugly. On the outside of the cylinder F is a third cylinder G, which extends from the deck to the same height as the cylinder F, to which it is secured, both cylinders being properly strengthened by fillets, knees, and other appropriate appliances. From the upper edge of the cylinder F projects a horizontal flange *a*, which rests on the vertical flanges *s* of any convenient number of pinions, each pinion H being secured to a shaft I, one journal of which turns in a projection on the upper edge of the cylinder G, the other journal turning in the upper edge of the cylinder E, and the teeth of the pinion H gearing into a circular rack on the under side of the flange *a*.

Within the movable cylinder F are arranged a series of vertical bars K, which are maintained in contact with the inside of the cylinder by means of rollers *e*, (best observed on reference to Fig. 2,) these rollers being hung to projections on frames L, secured to the cylinder F, one near the upper and the other

near the lower edge of the said cylinder. The projections from the frames L serve as guides to maintain the bars K in their proper lateral position, so that they can move in a vertical direction only, independently of the cylinder F. Each bar K has on one side a rack, and into this rack gears a pinion *m* on a spindle the journals of which turn in projections *n* on the flange *a* of the cylinder F. To one end of the spindle is secured a ratchet-wheel *p*, and to the same end of the spindle is hung loosely a lever *q*, into which fits a bar *r*, this lever having a pawl for catching into the ratchet-wheel *p*, another pawl *u* being hung to the flange *a* of the cylinder F, and the point of this pawl fitting between the teeth of the ratchet-wheel *p*, so as to prevent the latter from turning.

The bars K are pointed at the lower end and furnished with suitable shoes.

It will be understood that the battery, although it can be towed from place to place, is intended for harbor defense and must always occupy a position where there is sufficient water to float it.

When the battery has to be used, the first thing necessary is to anchor it firmly in the position which it has to occupy. This is done by the bars K, which are allowed to fall by their own weight, after releasing the pawls *u* from the ratchet-wheels *p*, the points of the bars penetrating the ground, thus rendering the cylinder F stationary and causing it to form a secure center round which the battery may be revolved. This revolution is effected by means of suitable handles on the shaft I, on turning which the pinions gearing into the circular rack on the under side of the flange *a* of the tube F, (the rack with the said tube being stationary,) the cylinders G and E, and with them the entire outer shell, must revolve.

When one of the bars has to be raised, an attendant operates the lever *q*, and through the ratchet-wheel *p* causes the pinion *m* to raise the bar.

It will be understood that although I have shown handles and pinions gearing into a rack for rotating the vessel round the fixed cylinder F, other devices driven by steam-power may be used for the purpose.

The space beneath the deck is divided into any convenient number of water-tight com-

partments by means of radial partitions extending from the cylinder F to the sides of the vessel. The space between the roof and the deck is also divided into compartments or casemates by radial partitions which extend from the circular partition P to the sides of the vessel, each casemate being of sufficient size to allow for the free working of a gun of the size required for the battery, and the front of each casemate having an opening x of sufficient size to admit the muzzle of the gun.

Doorways y form a communication between the casemates and the avenue inclosed by the circular partition P, from which avenue proper communication may be formed with the compartments and magazines below.

On the apex of the roof is a circular opening Q, covered by a bomb-proof grating, this opening serving, in conjunction with other grated openings which it may be found necessary to place at different points of the roof, to ventilate and light the interior of the battery.

A railed platform T is situated in the center of the battery and is secured to cross-bars attached to the cylinder F. The commander of the battery, taking his stand on this platform, which of course is stationary, is in a position to direct the operations of the gunners as well as of those who have charge of the rotating of the battery. He is also enabled to observe,

through suitable openings n in the roof, the position and intentions of an attacking party.

Suitable stanchions W will be necessary to support and strengthen the bomb-proof roof as well as the deck, and other modes (not shown in the drawings) of securing the entire structure may be found expedient.

I do not desire to claim, broadly, a circular battery caused to rotate round central anchoring-bars; but

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

1. The vessel, with its central opening, in combination with the tube F and anchoring-bars K, for rendering the said tube stationary while the vessel is revolved.

2. The tube E, forming a part of the vessel, in combination with the tube F and its flange a , the said flange resting on the pinions H, or their equivalents, of the tube E, as specified.

3. The platform T, secured to the tube F and arranged substantially as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

A. B. COOLEY.

Witnesses:

HENRY HOWSON,
JAMES MCCAHEN.