

MAINE STATE LEGISLATURE

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Stevens & Sayward
DOCUMENTS

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THE LEGISLATURE

OF THE

STATE OF MAINE.

1863.

AUGUSTA:
STEVENS & SAYWARD, PRINTERS TO THE STATE.
1863.

FORTY-SECOND LEGISLATURE.

SENATE.

No. 9.

REPORT.

THE Committee on Frontier and Coast Defences, to whom was referred an order of inquiry into the merits of "Currier's Improved Shot-proof Dome or Cupola, for Sea and Land Service," ask leave to

REPORT :

That they have examined the plans and specifications exhibited by the inventor, Mr. Alexander Currier of Hallowell, which examination has resulted in confirming the unanimous opinion of your committee of the practical utility of this invention, and also of the special improvements it exhibits on the shot-proof turrets now in use, of which your committee have any knowledge. These improvements appear to consist

1st, That in this dome, or cupola, is found the best form for stability and absolute strength, with less surface exposed to the enemy's shot, in proportion to the working area secured within the dome; and that on account of greater angles being presented to shot, in whatever line falling, is not only secured an increased tendency to glance them off harmless, but the necessity of so thick plating and weight of armor for defences is also obviated.

2d, It can be taken nearer to elevated fortifications, with less danger from plunging shot entering the top, while greater elevation of the guns is acquired; an improved and effectual method of closing the ports when the guns are withdrawn, is also presented.

3d, Small apertures are provided, which answer the various purposes of observation, ventilation, light, and the use of musketry.

4th, In setting the base of the dome or cupola into the vessel, on special beams, (and a grated flooring,) below the top of the bulwarks or glacis, thus affording absolute protection from shot to

the lower portion of the dome, and lowering the center of gravity in such manner as will much improve the sea-going capacities of the vessel—a very important consideration in regard to iron-clad ships.

5th, The reverberations of sound, and the consequent effect upon those within the dome, is essentially reduced by the thorough ventilation of the dome secured in this invention. A new and feasible security from the ingress of water, from any cause, around the dome, is also presented.

6th, Immunity from derangement of the rotary movement of the dome, by reason of obstructions in the crevice between it and the sides of the vessel; and the resting of the dome, when in action, upon its full bearings, both near the circumference of the base and at the centre.

For these, and other less important reasons, your committee are of opinion that this invention possesses advantages over any other structure for a like purpose now in use.

Although at this time, when the powers, offensive and defensive, seem striving for the mastery, maintaining a well poised contest; huge artillery, proposing to annihilate defences more formidable than any known to former days, it is scarcely possible for the most discriminating and scientific minds to determine with any degree of certainty in *what* will consist resistless aggression or successful defence. Your committee conceiving important questions of this nature to be in suspense, and being under no instructions to report any particular modes of defence for our coast or frontier, feel it nevertheless their duty to suggest or recommend such specific improvements in warlike preparations as may come under their observation to the authorities having the direction of such matters. We therefore recommend Mr. Currier's invention as being in our opinion worthy the attention of both our State and National Governments, and also herewith submit the following Resolve.

A. P. EMERSON, }
GEO. STETSON, } *Chairmen.*

STATE OF MAINE.

RESOLVE relating to "Currier's Improved Shot-proof
Dome or Cupola."

Resolved, That the secretary of state is hereby
2 instructed to forward without delay copies of the fore-
3 going report of the committee on frontier and coast
4 defences, to the heads of the navy, war and engineer
5 departments at Washington, and also to the several
6 members of our congressional delegation.

STATE OF MAINE.

IN SENATE, March 3, 1863.

Reported by Mr. EMERSON, and laid on the table on motion of Mr. BARROWS and 350 copies ordered to be printed for the use of the Legislature.

EZRA C. BRETT, *Secretary.*