

# MAINE STATE LEGISLATURE

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DOCUMENTS

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OF THE

STATE OF MAINE.

1862.

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1862.

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# FORTY-FIRST LEGISLATURE.

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HOUSE.

No. 4.

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## REPORT

*Of the Joint Select Committee to whom was referred an Order passed January 27th, 1862, instructing them to examine "Timby's Iron Revolving Fortification."*

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The Joint Select Committee to whom was referred an Order passed January 27th, 1862, instructing them to examine "Timby's Iron Revolving Fortification," have attended to that duty, and

### REPORT:

That the desiderata to be sought in the construction of a fort, aside from its location, are the ability to inflict the greatest amount of injury upon the assailant, with the greatest immunity from danger to the fort and to the lives and limbs of its defenders.

In the present mode of defence against an attack by sea, the fort is, of necessity, a much larger object than a ship, and consequently in danger of receiving the enemy's shot in that proportion. Timby's fort, on the contrary, is a much smaller object than a ship; for one constructed to mount 100 guns of the largest calibre need be only about 100 feet in diameter, and furthermore being circular a large proportion of the shot that might strike it would glance off without damage.

These advantages are owing to size and form. That the material of which this fort is to be constructed is superior to stone or earth in its capability of resistance to the action of projectiles, no one at present doubts; but the mode of construction which this fort allows

—and this only—of having its port holes reduced to the diameter of the muzzle of the gun horizontally, and to be vertically no more than sufficient to allow for the elevation of the gun—when compared with the width of embrasures absolutely necessary in the present mode—shows a decrease of risk of the enemy's shot coming into a port hole, of more than 90 per cent. ; and no projectile of the enemy could cause any essential injury to Timby's fort, except it struck the muzzle of a gun or within a very short space above or below, and even then with each gun in a separate casement, as it will be, all the damage from such a shot could be only to decrease the number of effective guns in the fort by one, leaving all the rest unharmed.

In our present construction of forts, a projectile entering an embrasure may not only dismount the gun but may enter the fort and cause much further damage.

The great difficulty under which all easements have hitherto labored is the excessive heat and smoke therein. Such was felt to be the case most sensibly at Sumpter on the memorable 12th of April, 1861. This fort, and this only, obviates that objection, by means of a blower, driven by the engine which revolves the fort; and which by driving a current of pure air through every casement clears it of smoke, and keeps the temperature at a suitable point. So much for its comparative immunity from damage by an assailing foe. Now in regard to its capability of inflicting damage on an assailant.

Every one who has seen Timby's fort cannot fail to perceive its vast superiority over our present style of fortification; for the accuracy and rapidity with which projectiles can be thrown by it is as much beyond the old mode as any work done by machinery is more accurately and rapidly done than by hand labor. Every one knows the difference on both these points between all the multifarious articles of wood or metal or textile fabrics with which our various manufacturers supply our markets and the same description of articles made by hand even by the most skillful workmen. The same principle applies in the fullest manner to this fort, so that all that is required of the operator is the capability of sighting the object, and the guns, as the fort revolves, will continue to be successively discharged

in that precise direction without any further action on his part, and all the guns in the fort will be discharged as often as once in a minute. When the object aimed at changes its position, the operator has only to take a new sight, and the fort continues to revolve, discharging every gun at precisely the same point as accurately as machinery can be made under any possible circumstances. The fort is so constructed as that this accuracy can be easily put to the test, and if on trial it should not prove perfect, all adjustments can easily be made, and the whole will continue correct thereafter, no change being required horizontally. The adjustments for equal elevation are made in a similar manner, and when any change is required by the change of distance of the enemy in the course of the action, a signal from the operator to each gunner, at the same moment, instructs him the exact quantity to elevate or depress, which is so marked by an index as to insure perfect equality.

The mode of firing by electricity is not the least beautiful part of the arrangement. The index sighted over being always charged positively, the moment a gun comes in range with it the fluid passes to the powder through a rod and chain, without any act on the part of the operator, thus ensuring perfect accuracy in point of time as well as in direction and elevation.

In one important point this fort has a vast advantage over the old construction, not only for attack but for defence also. It is the same on all sides, and presents its whole force to every point of the compass. The great disadvantage of having a weak side was most lamentably felt in Sumpter, and to a very serious degree at Pickens. Fortress Monroe is so situated as to require the use of a large part of the horizon in case of a foreign war, and in such a war as the present the whole is needed. Who that has examined the subject can doubt that a fort on Timby's plan, that would cost less than one-quarter of the amount that has been spent on that fortress, would be far more effective?

On a review of the whole subject, therefore, and an examination of all the various points of comparison, and a careful consideration of all the merits and disadvantages of either construction, the invention of Mr. Timby in whole and in detail appears to your committee as near perfection as the faculties of man will admit, being

many times more capable of inflicting injury on an attacking foe than can be done by the same guns in a fort as now constructed, and on the other hand so little exposed to damage from attack that the risk to the fort and to the garrison is reduced to a minimum.

The weight of a fort of this construction suitable for 100 guns of the largest calibre would probably not exceed 3000 tons, a weight not greater than has been drawn up a marine railway, and an ordinary locomotive engine would be amply sufficient for the motive power.

The cost would be probably not more than two-thirds that of an ordinary fort carrying the same weight of guns, and not a fifth part that of a fort on the present construction of the same force and availability. Your committee therefore recommend the passage of the annexed resolutions.

All which is respectfully submitted.

Per Order.

JOHN HAYDEN.

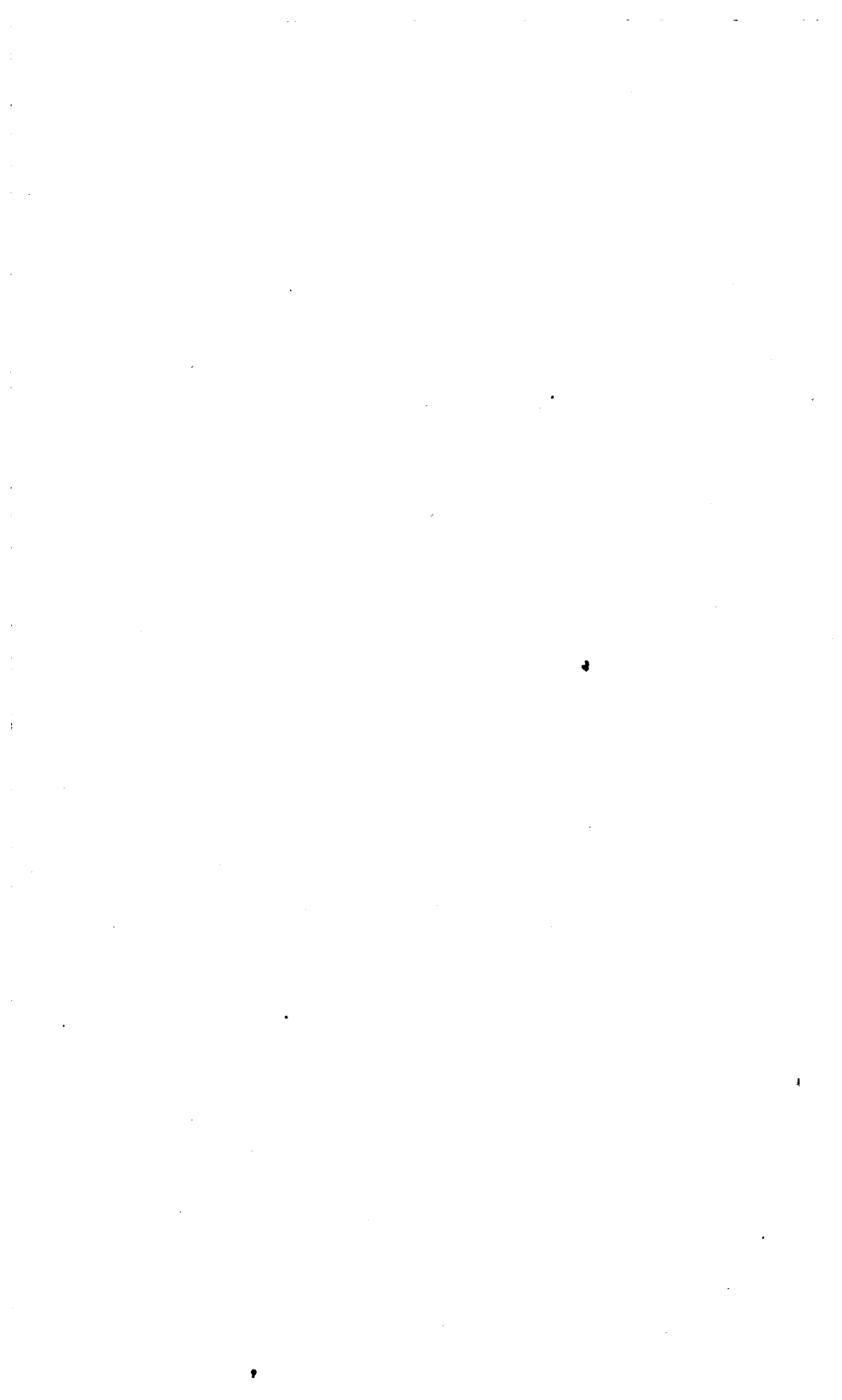
## STATE OF MAINE.

RESOLVE relating to Timby's Iron Revolving Fortification.

*Resolved,* That "Timby's Iron Revolving Fortification" is in the opinion of this legislature the most important arrangement for coast defence that has ever been proposed, and one which we believe is destined to work a complete revolution in the mode of constructing fortifications.

*Resolved,* That the legislature of Maine hereby earnestly recommend to the general government the immediate adoption of measures to test the efficiency, economy and immunity from danger to the garrison to which this invention presents such strong claims.

*Resolved,* That a copy of these resolves and the accompanying report be sent to the president of the United States, to the secretaries of war and of the navy and to each of our senators and representatives in congress.





STATE OF MAINE.

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HOUSE OF REPRESENTATIVES, }  
January 28, 1862. }

Reported by Mr. HAYDEN of Bath, from the Joint Special Committee to examine Timby's Revolving Fort, and on his motion laid upon the table and 350 copies ordered to be printed for the use of the Legislature.

CHARLES A. MILLER, *Clerk.*