

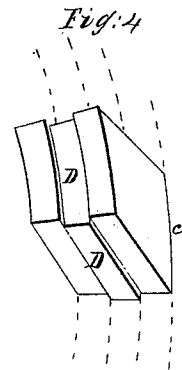
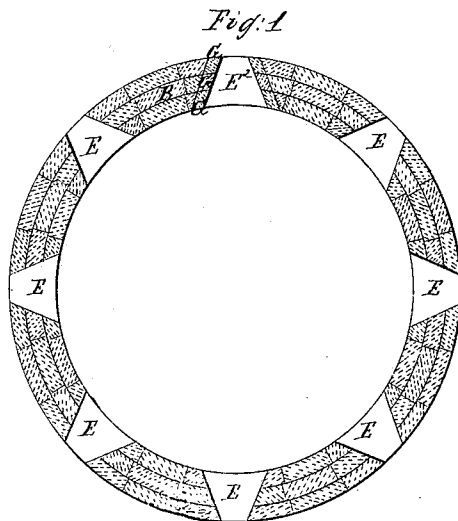
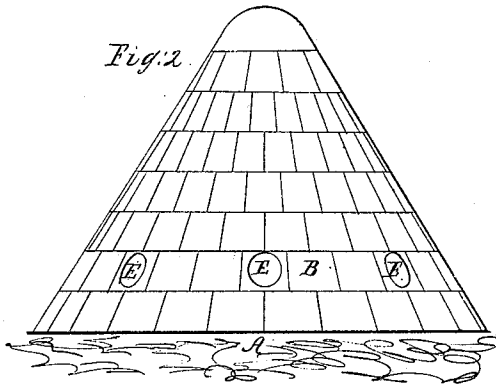
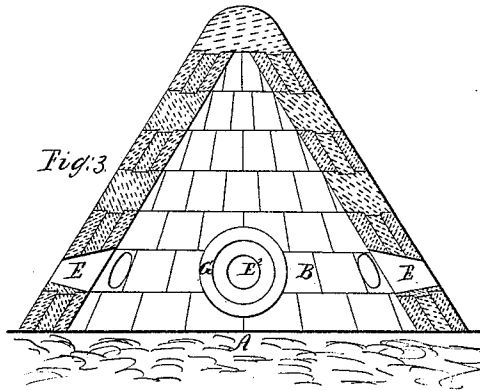
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A. Roff.

Iron Structure.

Nº 38,127.

Patented Apr. 7, 1863.



Witnesses
Wm. Vine
Geo. Vine

Inventor
Ashon Roff

UNITED STATES PATENT OFFICE.

ALMON ROFF, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN FORTIFICATIONS.

Specification forming part of Letters Patent No. 38,127, dated April 7, 1863.

To all whom it may concern:

Be it known that I, ALMON ROFF, of the city of Bridgeport, county of Fairfield, and State of Connecticut, have invented a new and useful improvement in the mode of constructing fortifications for the defense of harbors and harbor-entrances and other localities; and I do hereby declare that the following is a correct description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the form and arrangement of cast-iron blocks, to be used in the construction of the walls of forts and other fortifications.

To enable others skilled in the art to make and use my invention, I will proceed to describe the form and mode of constructing and using the same.

In all the designs and constructions of fortifications for the protection of harbors and other localities, there are none that may be called bomb-proof and impregnable. I have endeavored in this specification to present to the world my design for a fort that may be rendered completely bomb-proof and impregnable, there being no limits to the strength and power of the same, and the mode of construction being perfectly simple, and the expense not so great as may be supposed upon a transient view of the same:

In the drawings, Figure 1 represents a ground plan of a circular and conical fort, and is the basis of this application. Fig. 2 is a front view of the same. Fig. 3 is a vertical section through the center.

In the first place, I build a foundation, A, of sufficient solidity and strength to support the weight of the cast-iron structure B. I then prepare and form the cast-iron blocks C, as shown in Fig. 4, about four feet in length, four feet thick, and about four feet wide, more or less, the width indicating the thickness of the walls of the fort. These blocks, as shown in Fig 4, C, have on the upper and lower faces a groove and tongue, D, of one-third the width of the surface and about one inch or one and a half inch in depth, (more or less;) also, each end of the same to have a similar groove and

tongue. The form of the face of the blocks is made to the required radius of the circle of the wall, and properly beveled at the ends of the faces to match into each other when placed in the walls, forming proper bonds and connections in every direction, so that each course of the blocks are bonded together—also the upper and lower course, both horizontally and vertically—giving to each and every block the strength of solid metal to the whole, rendering the whole structure a solid and immovable mass of iron, the size and height of which will be unlimited, except by judgment of the builders. In every course there will be required a keystone-block, where the form of the block must be varied so that it can be properly inserted to complete the course and complete the bond.

In building a conical fort, as shown in Figs. 1, 2, 3, the size of the blocks will be graduated in conformity to the shape of the cone. All the blocks and courses are so locked together, and their great weight renders any cement or adhesive substance unnecessary. The blocks can be placed in their situation by suitable power with ease and facility.

In the rear part of the fort, or the part the least exposed to attack, I form an opening in the wall by enlarging one of the ports sufficiently to allow the passage of large artillery or any other article, and also for an entrance to the fort. This opening I reduce again to the customary port-hole when required by making three wrought-iron rings, G G G, of the proper dimensions to fill up the enlarged space in the wall. These plates G G G are put into the opening from the inside, and are securely fastened by bolts or any strong and proper device.

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

The arrangement of the cast-iron grooved-and-tongued blocks to be used in the construction of fortifications, in the manner substantially as herein set forth and described.

ALMON ROFF.

Witnesses:

WM. VINE,
JOSEPH THOMPSON.