

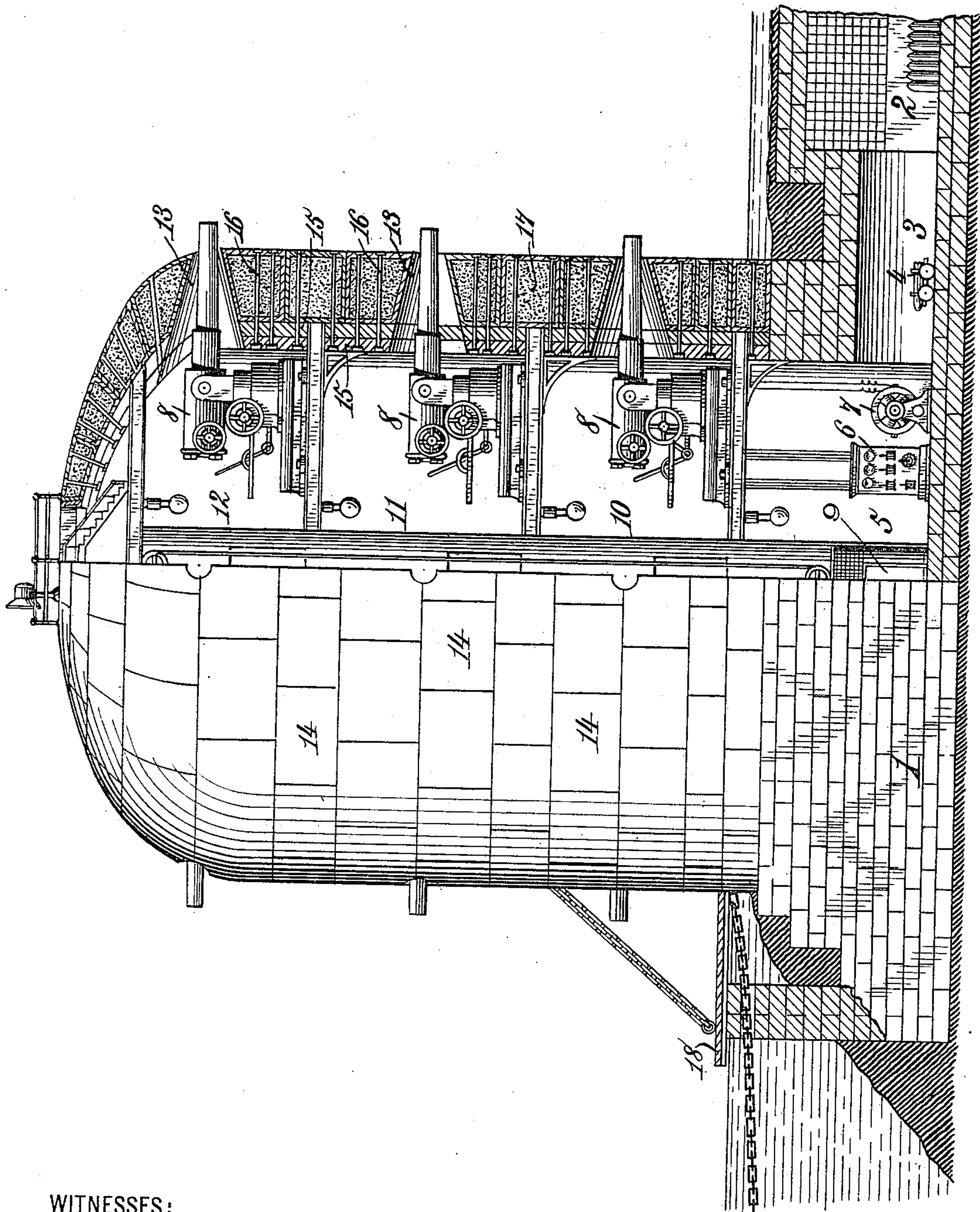
No. 620,161.

Patented Feb. 28, 1899.

M. C. MENGIS.
CONSTRUCTION OF FORTS OR FORTIFICATIONS.

(Application filed Apr. 1, 1898.)

(No Model.)



WITNESSES:

Fr. N. Roehrich
F. B. Keefe

INVENTOR

Morris C. Mengis

BY

James L. Norris
ATTORNEY

UNITED STATES PATENT OFFICE.

MORRIS C. MENGIS, OF NEW YORK, N. Y.

CONSTRUCTION OF FORTS OR FORTIFICATIONS.

SPECIFICATION forming part of Letters Patent No. 620,161, dated February 28, 1899.

Application filed April 1, 1898. Serial No. 676,134. (No model.)

To all whom it may concern:

Be it known that I, MORRIS C. MENGIS, a citizen of the United States, residing at New York, (Sheepshead Bay,) in the county of Kings and State of New York, have invented new and useful Improvements in the Construction of Forts or Fortifications, of which the following is a specification.

My invention relates to improvements in the construction of forts or fortifications chiefly intended for harbor defense, but applicable in the construction of forts for inland operations.

The object of my invention is to provide forts or fortifications of novel construction and possessing armor or safeguards of great security to the officers and men within and so constructed that in the event of a projectile or shell striking the fort or fortress the damage thereto is minimized.

To these ends the invention consists in the novel features of construction and arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawing, which is a view, partly in elevation and partly in section, showing a fort or fortification constructed in accordance with my invention.

In the drawing the reference-numeral 1 indicates the foundation of the fort or fortification, which is preferably constructed of granite blocks, but may be of any other suitable material or composition. Within the foundation is provided a projectile and powder magazine 2, communicating by a tunnel 3 with the interior of the fort, the ammunition being conveyed from the former to the latter by means of suitably-propelled cars or trucks 4. In a lower compartment 5 of the interior of the fort is arranged engines and dynamos, such as at 6 and 7, to provide the motive force for manipulating the guns 8 and an elevator 9 for carrying ammunition, projectiles, or other necessities from said lower compartment to the several upper compartments in which the ordnance is arranged.

As shown in the drawing, my improved fort or fortification is constructed in several floors or stories 10 11 12, in each of which I arrange any desired number of guns 8, pointing in various compass directions. As shown, the ports 13, through which the muzzles of the

guns project, are conical in shape and narrower at the exterior wall of the fort or fortification; but the particular formation of such ports is immaterial.

The fort or fortification is constructed upon the foundation 1 and is composed of a number of boxes or compartments 14, arranged in several horizontal series. The several series of boxes or compartments break joints with the adjacent series. These boxes are constructed of steel or iron or other material suitable for resistance or armor and are made substantially square, as shown in the drawing. They are backed up by thick plates 15, of steel or other suitable material, and are firmly secured to the plates by means of bolts 16, which are shown with heads embedded in recesses in the exterior walls of the boxes or compartments, the bolts extending entirely through the same and through both of the backing-plates, where their ends may be spread, or they may be provided with suitable securing-nuts. In this way the boxes or compartments are securely held to and form an integral part of the fort or fortress construction. The boxes or compartments are hollow and are entirely filled, as shown, with a body of sand, gravel, or fine rock 17.

It will be obvious from the foregoing explanation that the officers and men and the interior of the fortress are securely guarded by my improved construction, for if a shell or projectile should strike the fort it will encounter the resistance of the outer or exterior wall of a box or compartment, and if such wall is penetrated the projectile will meet the filling-body of sand, gravel, or fine rock, where its progress will be stopped. If the projectile should come with extraordinary force and sufficient to break the great resistance of the body of sand, gravel, or fine rock, it will encounter the resistance of the thick backing-plates 15.

Each box or compartment 14 composing the fortress is separate and distinct from every other box or compartment, so that if a shell or projectile should strike one of the compartments and penetrate it the damage would occur only to that particular box, all the other boxes or compartments remaining intact and containing their original filling of sand, gravel, or fine rock.

The backing-plates form a very firm base to support the boxes or compartments, and the bolts which secure the latter to the former are of such strength that if a box or compartment in any horizontal series is totally destroyed the adjacent boxes or compartments in the series next above will be firmly supported by the bolts which fasten it, with the assistance afforded by the arrangement of the several tiers of boxes lapping joints with the adjacent series.

The front or exterior walls of the several boxes or compartments may be composed of a single plate or piece of metal or be constructed in several sections, and thus the damage occurring from the penetration of a shell or projectile is decreased, as but one of the plates composing the exterior wall can be penetrated, and the amount of sand or gravel or fine rock which may escape through the puncture will be materially lessened.

I have shown a search-light arranged at the top of the fortified structure and means for having access thereto. Other usual accompaniments of a fortress may be provided, as will be readily understood, these details not being material to my invention. A means of access to the fort from the water side consists of a gateway 18, connected with a chain to raise and lower the same from the interior of the fort.

My invention is important, valuable, and advantageous in that the operations in the fortified structure may be conducted from a plane aboveground with the least possible danger to the officers and men, and they have perfect freedom at any part of the fort.

Having thus described my invention, what I claim is—

1. A fort or fortification constructed with separate hollow boxes or compartments filled with sand, gravel or fine rock, and a suitably secured backing, substantially as described.

2. A fort or fortification, consisting of separate hollow boxes or compartments filled with sand, gravel or fine rock, a backing, and bolts securely fastening said boxes to the backing, substantially as described.

3. In a fort or fortification, the combination with a backing, of separate hollow boxes or compartments filled with sand, gravel or fine rock, and bolts passing through said boxes or compartments and the backing, whereby the former are securely fastened to the latter, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MORRIS C. MENGIS.

Witnesses:

F. B. KEEFER,
GEO. W. REA.