O. HOPKINS.

Defending Redoubts.

No. 34,206. Patented Jan. 21, 1862.

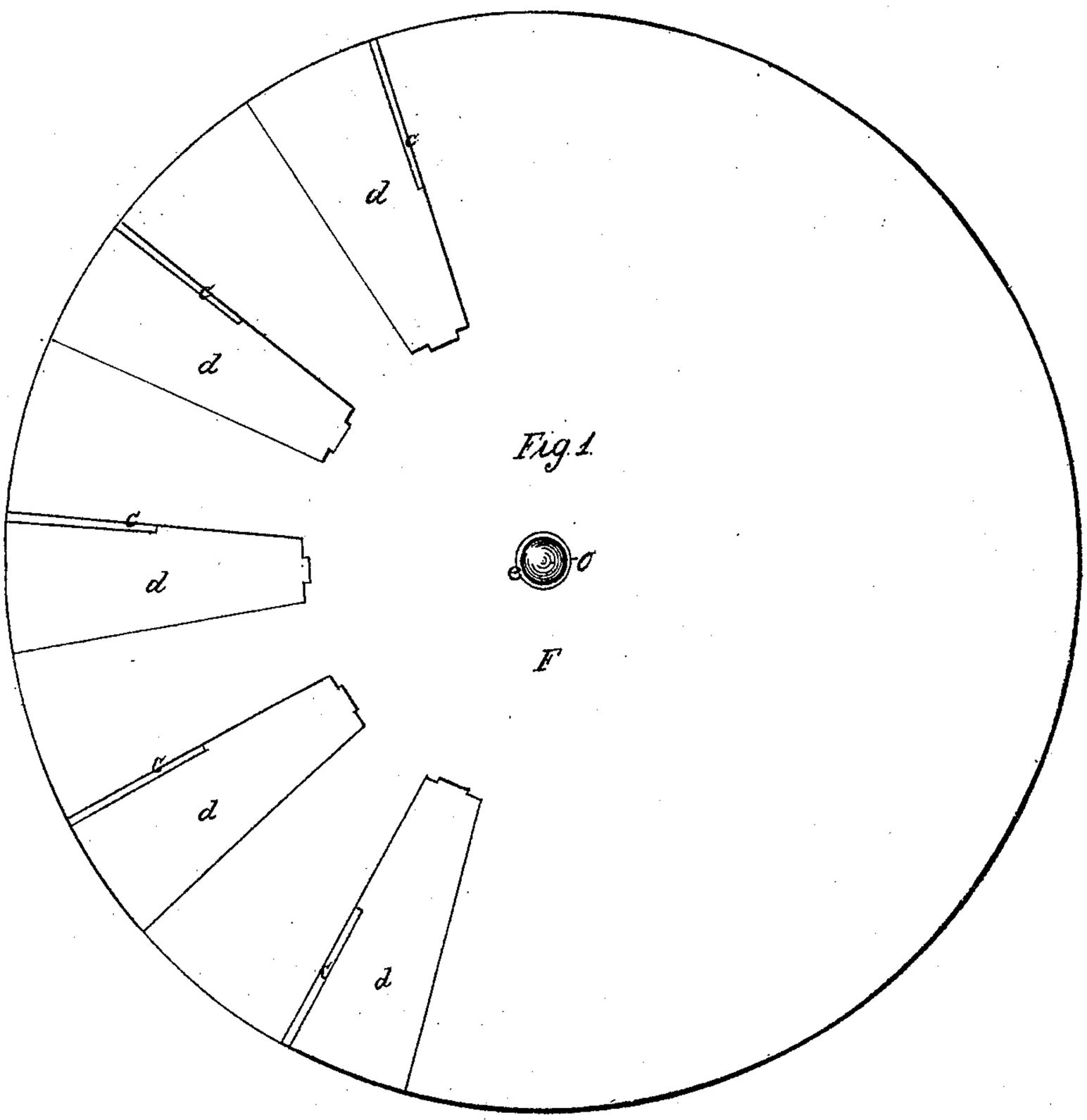
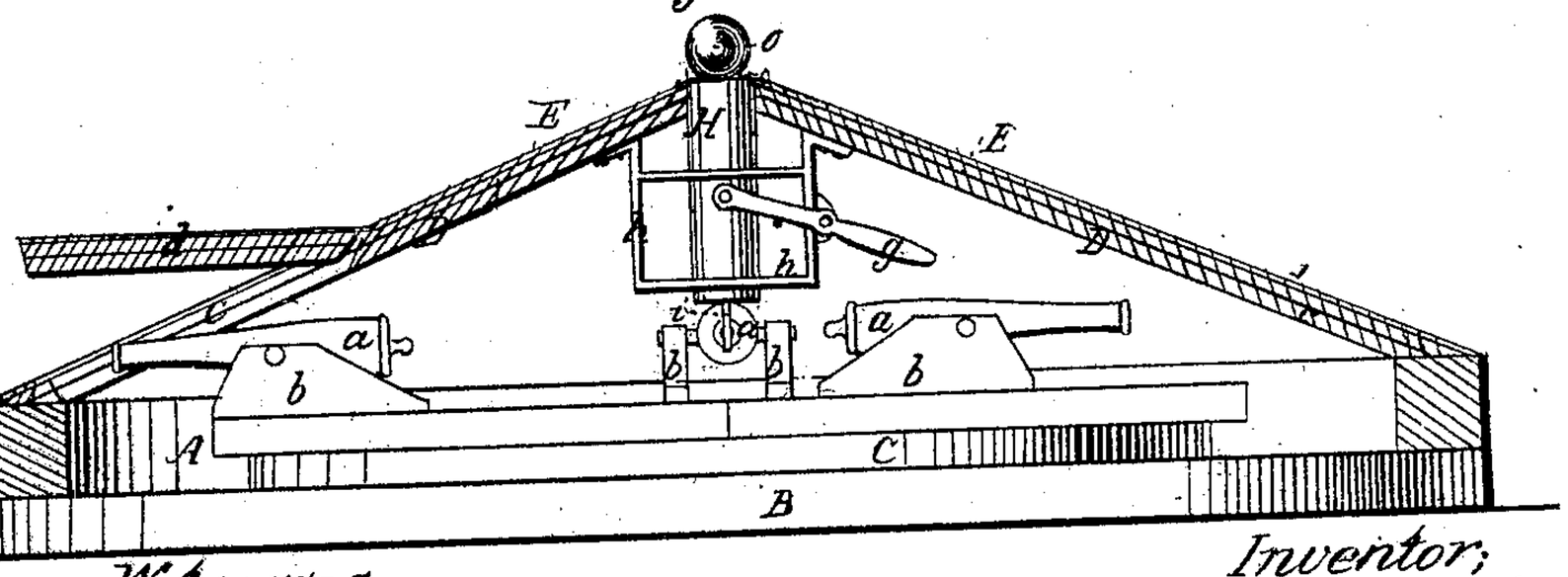


Fig. 1.

F

Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

OBADIAH HOPKINS, OF NEW YORK, N. Y.

IMPROVEMENT IN DEFENDING REDOUBTS BY SHELLS.

Specification forming part of Letters Patent No. **34,206**, dated January 21, 1862.

To all whom it may concern:

Be it known that I, OBADIAH HOPKINS, of the city, county, and State of New York, have invented a new and useful Improvement in the Construction of Redoubts or Fortifications for Field or Harbor Defenses; and I do hereby declare that the following is a clear and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows a plan or top view. Fig. 2 represents a vertical section through the center.

My invention consists in the application of a mechanical device for elevating and exploding shells at the apex of the redoubt.

To enable others skilled in the art to make and use my invention, I will describe the mode of construction, the plan of operation, and effects in detail, referring to the drawings, and to the letters marked thereon.

I excavate the earth so as to make a parapet A to the depth of four or more feet, as may be required, in the bottom of which I place a floor of strong plank B, on which is a turn-table C, mounting an armament of three guns *a a a* on carriages *b b b* of ordinary structure, placed at equidistances on the circle, so as to radiate from the center and can alternately be brought to bear on any point.

The roof or covering for the redoubt is composed of heavy timber and plank D, placed at a suitable angle. On the top of the timber I place vulcanized india-rubber E of proper thickness, the external covering F of which may be of heavy boiler-plate or other suitable iron, the whole being firmly bolted together.

The openings or embrasures *c c c c* are made in the roof or iron incasement F, through which the guns are discharged, and are kept closed by a shutter or flap *d d d*, constructed in the same manner and of the same material as the covering F, and are only opened to discharge the cannon. In the apex of the covering is a round hole or opening *e*, directly under which is placed a piston H, the top of which is slightly concave and closes the opening *e* in the apex when it is elevated, the piston being secured in a vertical position in a frame *h h*, so that by the action of the lever *g* it can be depressed so as to receive shell on the top, and then elevated to bring the shell *o* above the covering to be exploded with perfect safety to the men in the redoubt. In case the shell should fail to explode in proper time, it may be removed by the lifting of the rod *i*, passing up through the center of the piston H.

It is believed that many advantages are to be derived by mounting more than one gun upon a turn-table to be easily brought to bear upon an object, and especially in a redoubt constructed on the principle above described.

By rapidly firing a single cannon it becomes so heated as to be unsafe to load; but by having three guns of the same dimensions so mounted that they can alternately be brought to the same point to be discharged this objection is entirely obviated, and while one of the guns is being sighted the process of swabbing and loading can be going on with the other two.

It is becoming an established fact in modern times that war is to be mainly carried on by cannonading at a distance and that fortifications are to be taken by rapid and heavy bombarding, and in view of this more general mode of warfare and the protection of the garrison I would construct all redoubts with a bomb-proof covering, which can be made of the material and in the manner above set forth, and to prevent the tearing off of the covering and storming the redoubt I elevate shells from underneath by the above-described mechanism to the upper surface of the apex, where one can be exploded every three seconds with perfect safety to those underneath and the entire discomfiture of the enemy. Having abundant supplies and being thus provided for, it will be seen that a small garrison could hold their position against a large force without much sacrifice of life or limb.

I do not claim the compound roof or covering to redoubts herein described, nor mounting an armament of three or more guns upon a turn-table; but

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

The application of the mechanical device or its equivalent for elevating and exploding shells above the covering at the apex, substantially as and for the purposes herein specified.

OBADIAH HOPKINS.

Witnesses:

EDW. F. BROWN,

J. B. WOODRUFF.