

(No Model.)

T. R. TIMBY.

4 Sheets—Sheet 1.

SHIELD AND TOWER SYSTEM OF FORTIFICATIONS.

No. 330,639.

Patented Nov. 17, 1885.

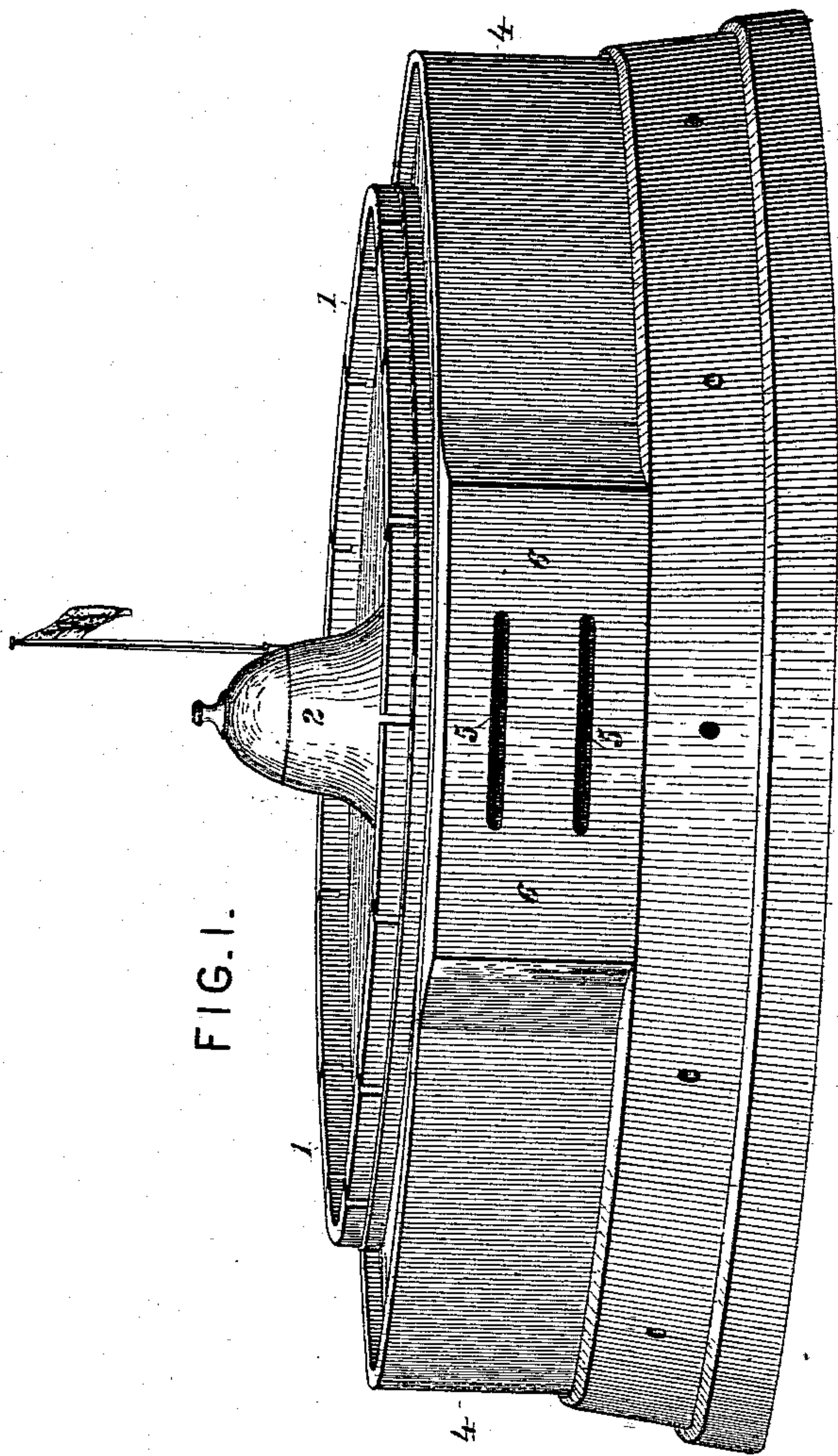


FIG. 1.

Attest.

Geo. T. Smallwood.
Jas. H. McArthur.

Inventor:

Theodore R. Timby.

By Knight Bros attys.

(No Model.)

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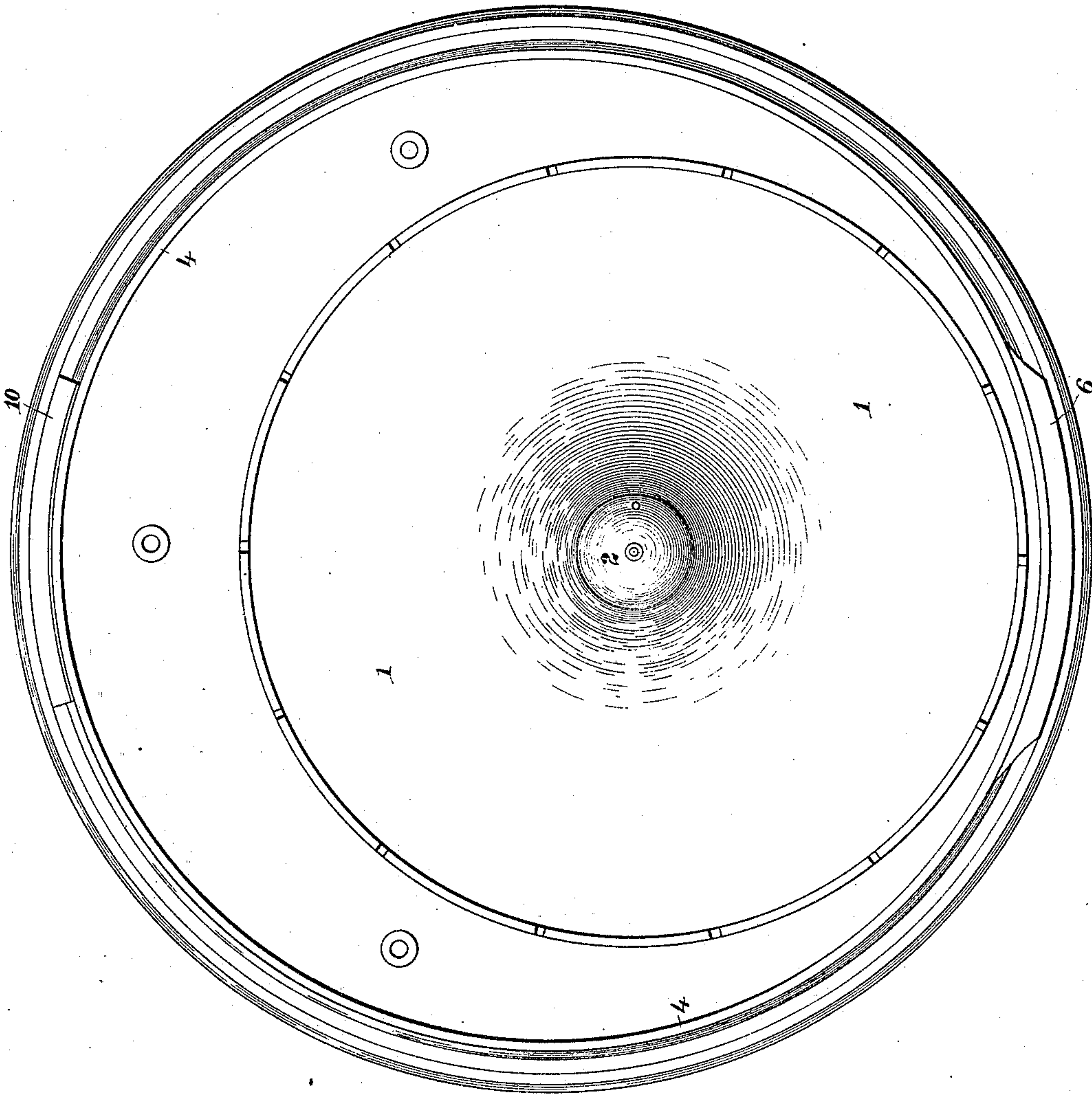


FIG. II.

Attest:

Geo. T. Smallwood,
Jas. H. McEachern.

Inventor:

Theodore R. Timby.
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attys.

(No Model.)

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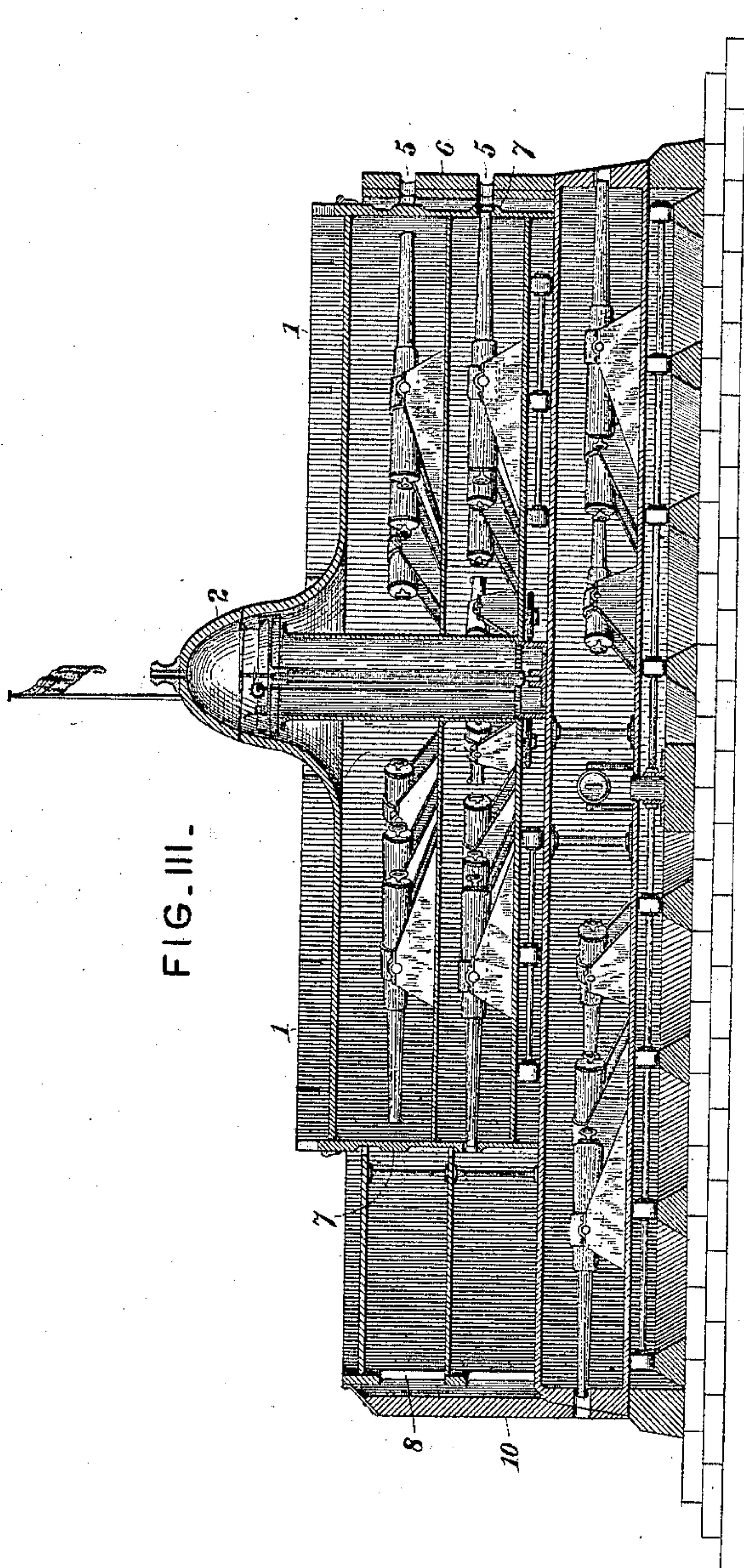


FIG. III.

Attest:

Geo. P. Smallwood.
Jas. H. McCreathman.

Inventor:

Theodore R. Timby
By Knight Bros. attys.

(No Model.)

4 Sheets—Sheet 4.

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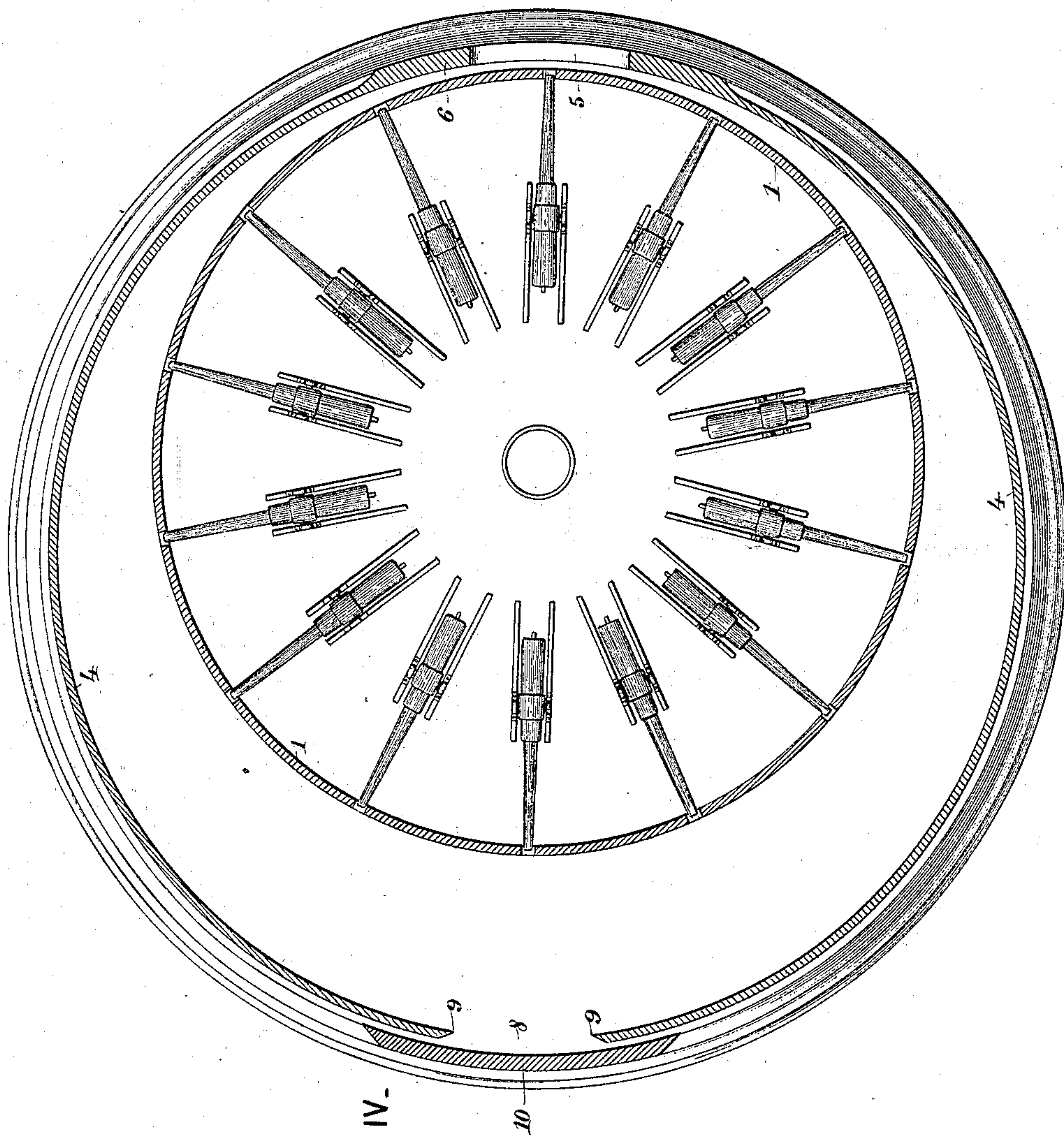


FIG. IV.

Attest:
Geo. T. Smallwood,
Jas. H. McArthur.

Inventor:
Theodore R. Timby.
By Knight Bros.
attys.

UNITED STATES PATENT OFFICE.

THEODORE R. TIMBY, OF NYACK, NEW YORK.

SHIELD AND TOWER SYSTEM OF FORTIFICATIONS.

SPECIFICATION forming part of Letters Patent No. 330,639, dated November 17, 1885.

Application filed May 9, 1885. Serial No. 164,932. (No model.)

To all whom it may concern:

Be it known that I, THEODORE R. TIMBY, a citizen of the United States, residing at Nyack, in the county of Rockland and State of New York, have invented a new and useful Improvement in Revolving-Tower Fortifications, of which the following is a specification.

The object of my invention is to strengthen and protect revolving towers used in my system of coast-defense, so as to reduce to a minimum the chances or possibility of accident or injury.

To these ends I provide the revolving tower with a movable protecting-shield entirely surrounding it. The tower extends above the surrounding shield in the shape of a dome for sighting and directing the firing of guns. The front of the shield is pierced with horizontal slots for firing through, and is re-enforced by additional armor-plating, so that in that part where a shot will strike in a line perpendicular to the surface the shield is much stronger than at other points where shots will strike the surface obliquely. The tower is re-enforced all around in line or on a level with the slots in the shield. In the rear of the surrounding shield, diametrically opposite to the horizontal slots or embrasures through which the guns are pointed and fired, an opening is provided through which an enemy's missile which may reach the interior of the shield through the firing-slot therein, and pass around in contact with the concave inner surface of the shield, can escape without damage. Deflectors are provided to direct missiles outward through said rear opening, and opposite this rear opening is a mask or shield to prevent the entrance of missiles from the rear.

In order that the invention may be more fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a perspective view of the structure. Fig. II is a plan of the same. Fig. III is a vertical section thereof, and Fig. IV is a horizontal section.

The revolving tower 1 is surmounted by a dome, 2, within which the officer sits to sight the guns, and is completely surrounded by an impregnable shield, 4, above which the sighting-dome 2 projects. In the front of the shield

are horizontal slots or embrasures 5, which by the movement of the shield are presented in any desired line of fire. The front portion of the shield is re-enforced by additional plates, 55 6, so as to render the shield much stronger at this part, which will be presented directly toward the enemy, than at others where shots will be received on a surface oblique to their line of motion. I also surround the tower 1 60 with a band or zone of re-enforce plates, 7, on a level with the openings 5 in the shield, so as to render the tower impregnable to shot at the point which is at any time presented behind or opposite the firing-openings 5 in the shield. 65 At the rear side of the shield, diametrically opposite the firing-openings 5, I provide a discharge slot or opening, 8, through which a missile entering obliquely through the front opening 5 will be discharged after being carried 70 by the deflection of the concave inner surface of the walls of the shield completely around within the shield from the front to the rear on the outside of the tower. I provide deflecting-angles 9 to insure the ejection of the missiles, as above described, and a mask, 10, to 75 prevent the entrance of missiles through the rear opening, 8.

In my Patent No. 312,230, granted February 10, 1885, I have described a revolving-tower fortification protected by a shield nearly 80 surrounding it, but leaving a narrow opening in the front, through which the face of the tower projects for firing. In my present invention I retire the tower so far within the 85 circle of the movable shield as to admit of extending the shield completely around the tower and pierce the shield with horizontal slots for firing through. The great advantages of this improvement consist in that I am enabled to 90 make the front portion of the shield very much stronger and heavier than the main body thereof, so that the whole shield is much reduced in weight, while its efficiency is greatly increased; and, further, that I dispense with the necessity 95 of great strength in the walls of the tower itself, excepting on the level of the horizontal openings in the shield. At this height I can make the wall of the tower itself practically impregnable by massive re-enforce bands, as 100 already described, and am thus enabled to materially reduce the weight of the entire tower.

It is evident that these advantages are not attainable with the structure shown in my Patent No. 312,230, above referred to.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination of the movable shield 4, having slots or openings in the front portion for firing through, and a revolving battery-tower located entirely within the circle of the shield, so that its front may be completely masked thereby, and having a sighting-dome, 2, projecting above the shield 4, as and for the purposes explained.
2. The combination of the revolving battery-tower 1, a shield, 4, completely surrounding said tower, having horizontal loop-holes 5, and the re-enforcing plates 6, applied to the front portion of the shield around the loop-holes 5, as and for the purposes set forth.
3. The combination of a revolving battery-tower, a shield surrounding said tower pierced for firing through, and a re-enforcing band extending around the tower in line with the firing-openings in the shield, substantially as herein set forth.

4. The combination of a revolving battery-tower, a protecting-shield surrounding said tower, pierced for firing through and having an opening in the rear for the escape of missiles, and deflecting-plates to direct the escape of missiles outward through said rear opening, substantially as set forth.

5. The combination of the revolving tower 1, the shield 4, surrounding the same, the opening 8 at the rear of the shield, and the mask 10, placed opposite the said opening to prevent the entrance of missiles, as explained.

6. The combination of a revolving battery-tower, a shield surrounding said tower, pierced for firing through and having a rear opening, a mask protecting said rear opening, and deflecting-plates for causing the discharge of missiles through the said rear opening, substantially as herein set forth.

THEODORE R. TIMBY.

Witnesses:

OCTAVIUS KNIGHT,
HARRY E. KNIGHT.