

79

(No Model.)

4 Sheets—Sheet 1.

T. R. TIMBY.

REVOLVING TOWER SYSTEM OF FORTIFICATIONS.

No. 330,641.

Patented Nov. 17, 1885.

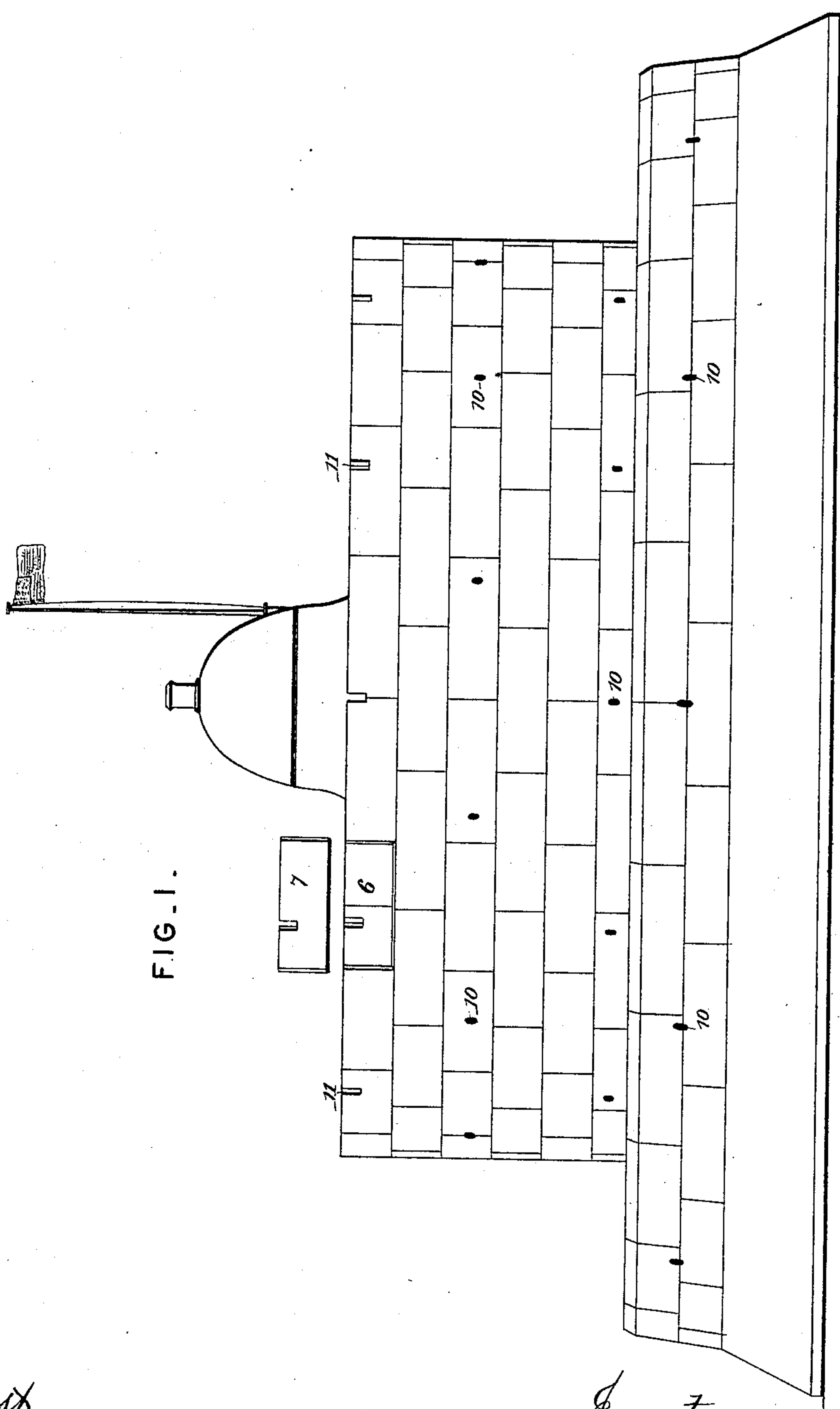


FIG. 1.

Attest.  
Geo. P. Smallwood.  
Geo. L. Wheelock.

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

(No Model.)

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FIG. II.

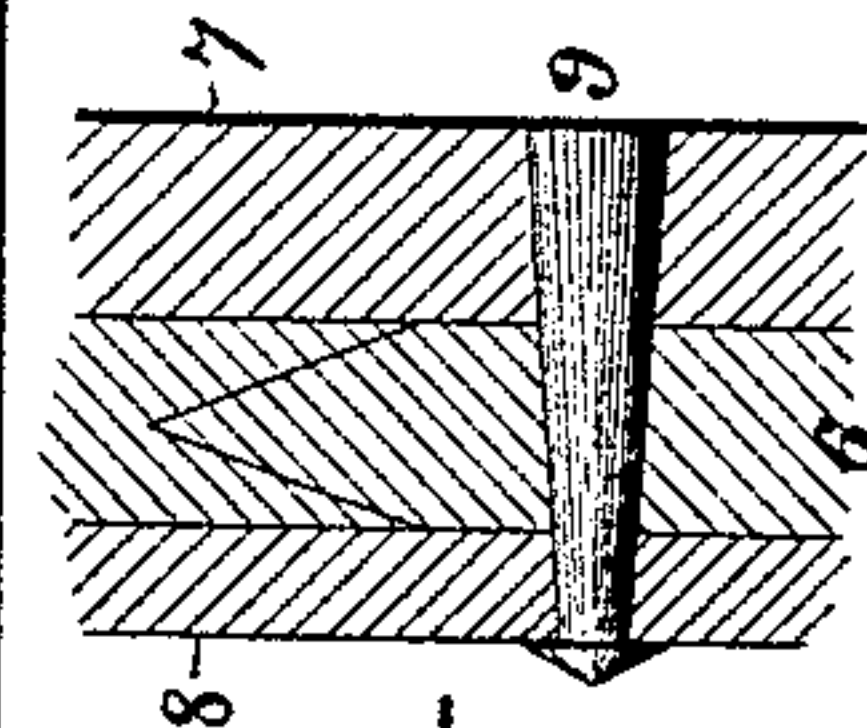
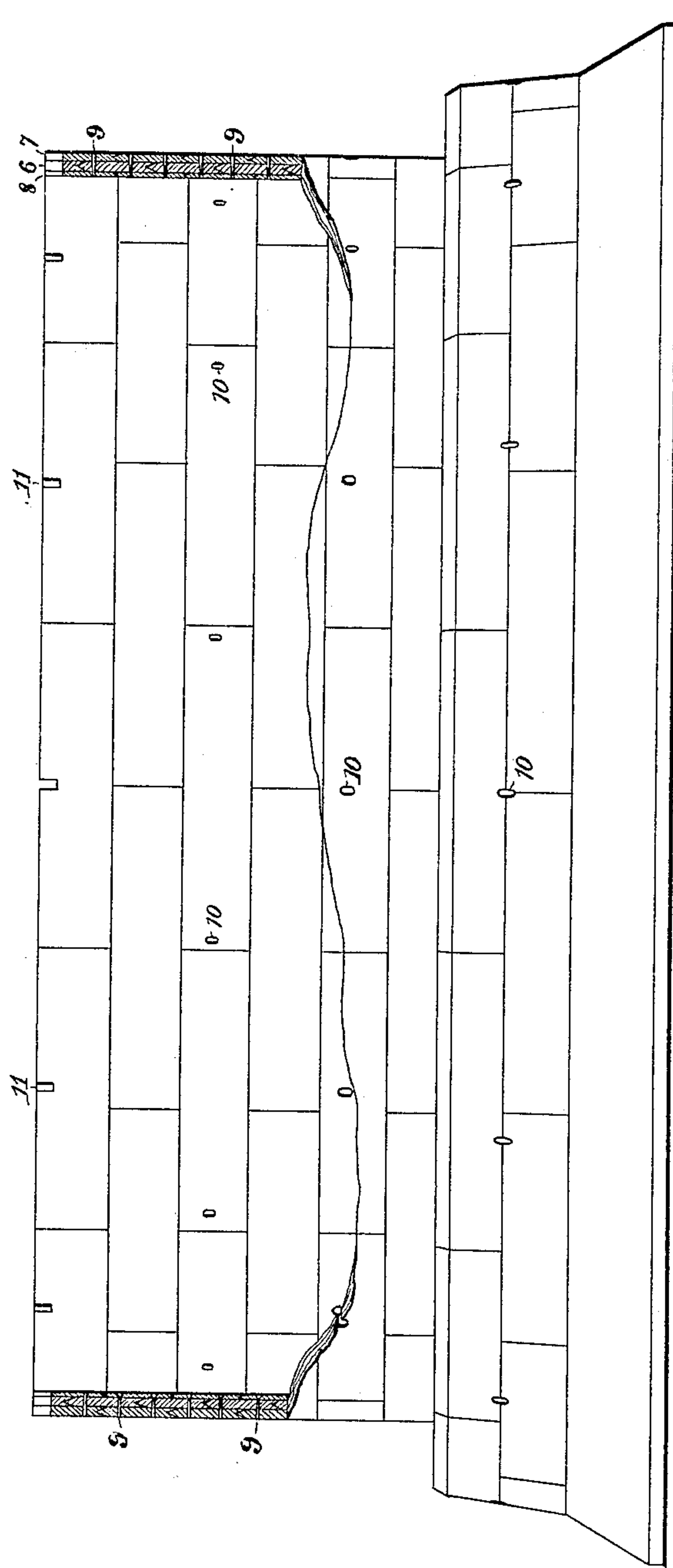


FIG. III.

Attest:  
Geo. P. Smallwood,  
Geo. L. Wheelock.

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(No Model.)

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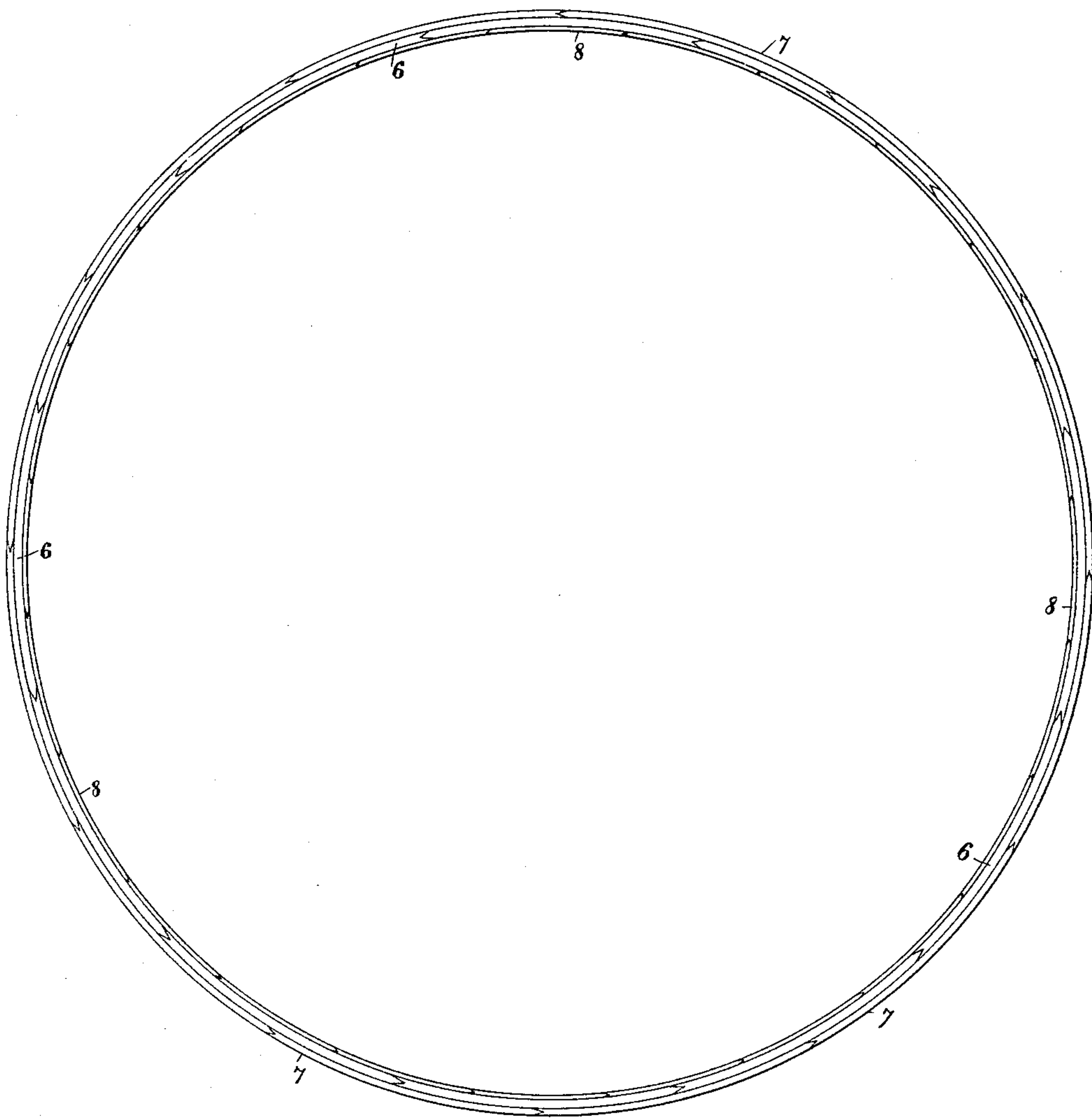
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FIG. IV.



Attest:  
Geo. P. Smallwood,  
Geo. L. Wheelock

Inventor:  
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(No Model.)

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FIG. VI.

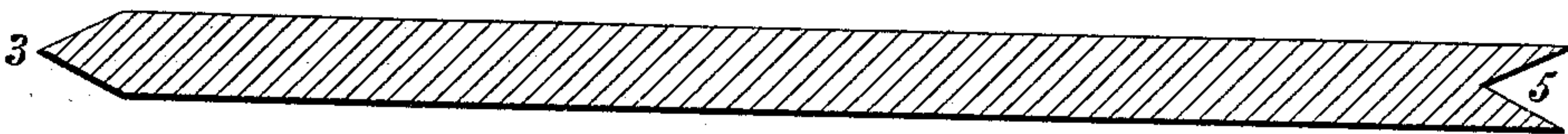
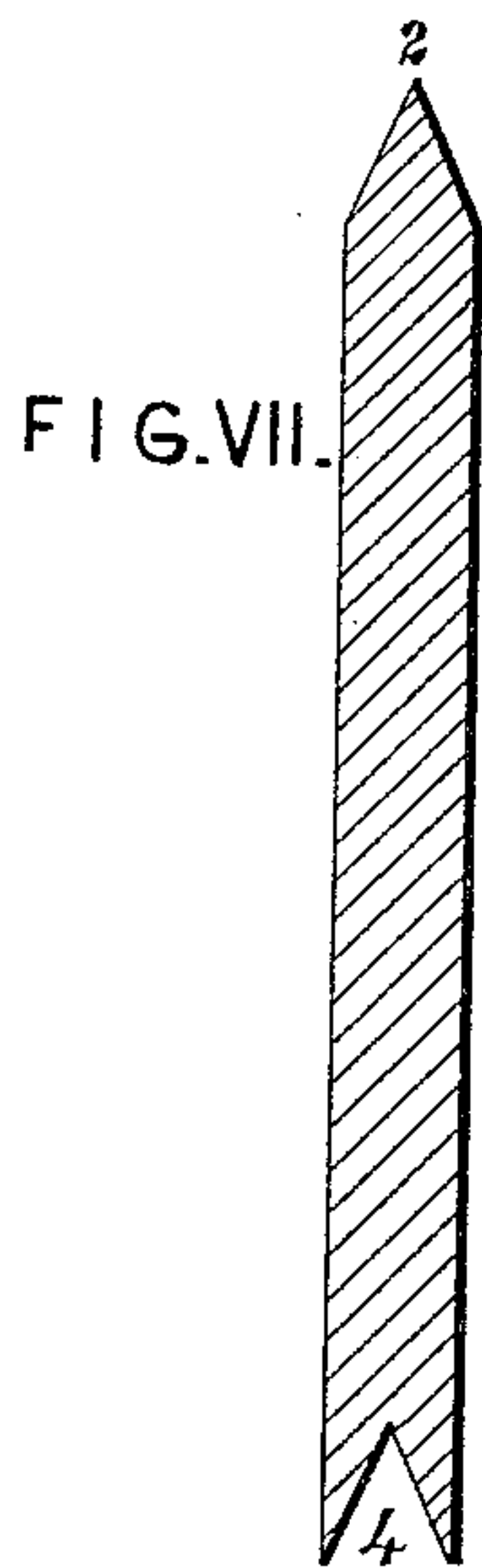
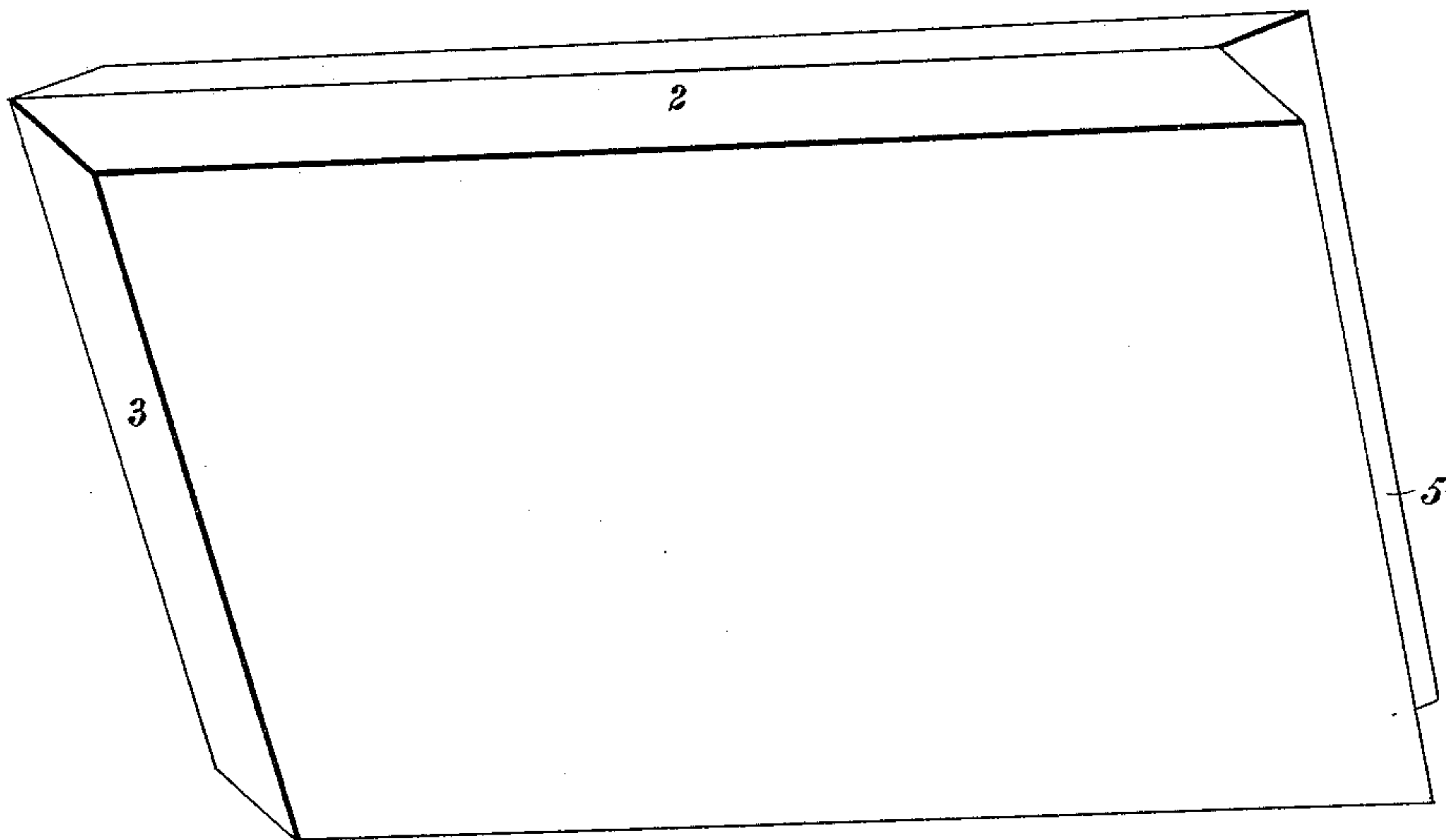


FIG. V.



Attest:  
Geo. P. Smallwood.  
Geo. L. Wheelock.

Inventor:  
Theodore R. Timby  
By Knight Bros.  
Atty's.



# UNITED STATES PATENT OFFICE.

THEODORE R. TIMBY, OF NYACK, NEW YORK.

## REVOLVING-TOWER SYSTEM OF FORTIFICATIONS.

SPECIFICATION forming part of Letters Patent No. 330,641, dated November 17, 1885.

Application filed February 5, 1885. Renewed September 21, 1885. Serial No. 177,777. (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 Systems of Fortifications, of which the following is a specification.

This invention relates to an improved mode of constructing the walls of revolving towers and the foundations thereof, so as to increase their strength and rigidity.

To this end I construct such walls of plates of cast-steel or other metal set together with V-shaped joints on both their vertical and horizontal edges, two or more thicknesses of such plates being so combined as to break joints, and the whole secured together by horizontal conical bolts driven from the outside and riveted on their inner ends.

In the accompanying drawings, Figure I is an elevation of a revolving battery-tower illustrating the invention, the last plate of a series being shown detached in order to illustrate the mode of inserting it. Fig. II is an elevation of the same, partly in section. Fig. III is a detail sectional view, on a larger scale, showing the form and mode of application of the conical bolts. Fig. IV is a top view. Fig. V is a detached perspective view of one of the plates on a larger scale. Fig. VI is a horizontal section of the same. Fig. VII is a vertical section thereof.

Each of the plates 1 of which the walls of the tower are composed is formed, as represented in Figs. V, VI, and VII, with a V-shaped tongue or saddle, 2, on its upper edge and a similar salient V-shaped edge or tongue, 3, at one vertical end, and with V-shaped grooves 4 5 at bottom, and at the other vertical end corresponding in shape to the V-shaped edges 2 and 3, respectively. The plates thus formed are put together, as illustrated in Figs. II and IV, the salient V-shaped edge 3 of each plate being fitted within a counterpart V-shaped groove, 5, in the preceding plate com-

pletely around the tower until one course of a single thickness of plates is completed with the exception of the last plate. This is then slid in from above, as illustrated in Fig. I in the case of the last or upper course. A second course is then laid on the same, the grooves 4 fitting over the saddles 2 of the course below, and so on. The central shell, 6, being completed in this way a second shell, 7, is built in the same way on the outside, breaking joints between the two shells or vertical courses 6 and 7, as illustrated in Fig. IV, and also between the horizontal courses, as illustrated in Figs. I and II. An inner facing-shell, 8, may be added in like manner, if desired, and the wall may of course be extended to any required thickness, and with any desired number of shells or thicknesses of plates. The wall being thus built in any desired number of shells or thicknesses of plates, the said shells and the plates composing them are securely tied together by bolts 9, of conical form, tapering toward their inner ends, driven from the outside and securely riveted at their inner ends over the inner surface of the wall, as shown in Fig. III, or in countersinks in the inner shell, 8, as seen in Fig. II. It will be apparent that conical bolts 9, driven from the outside, are free from any liability of being injured or loosened by the impact of projectiles. Suitable port-holes are shown at 10 for the casemates and at 11 for guns in barbette.

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

A fortification-wall constructed of a number of shells or series of plates formed with counterpart V-shaped ridges and grooves, respectively, on their meeting edges, so as to interlock, the whole secured together by horizontal conical bolts inserted from the exterior, as herein shown and described.

THEODORE R. TIMBY.

Witnesses:

OCTAVIUS KNIGHT,  
L. M. HOPKINS.