

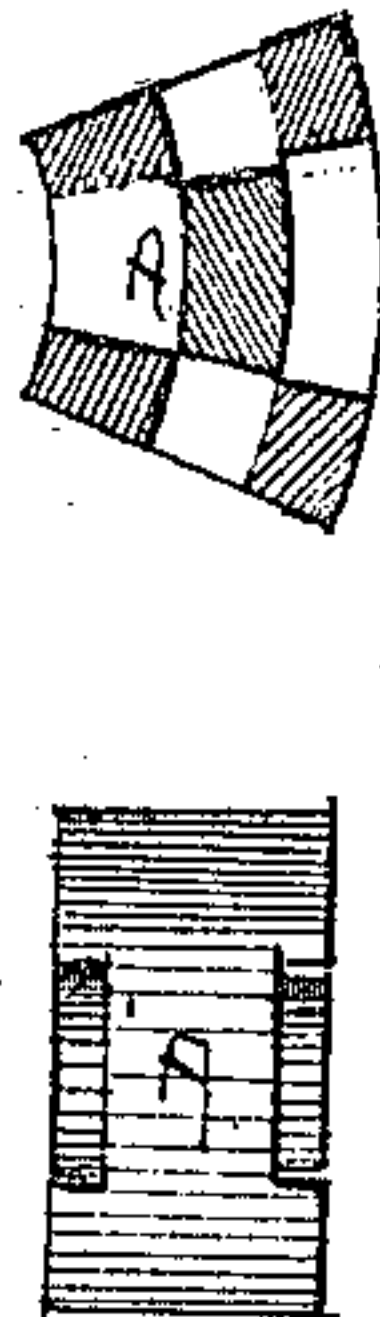
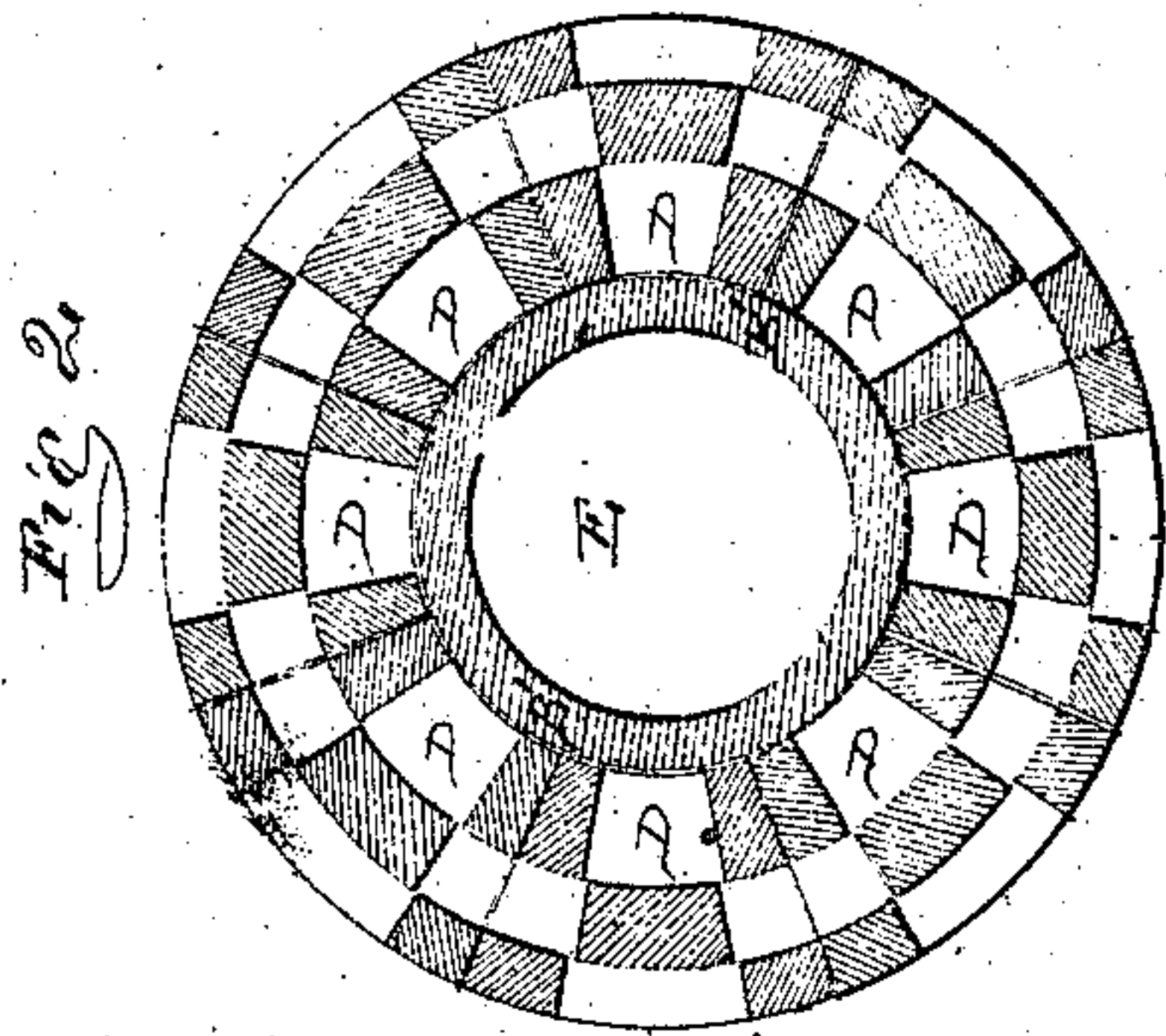
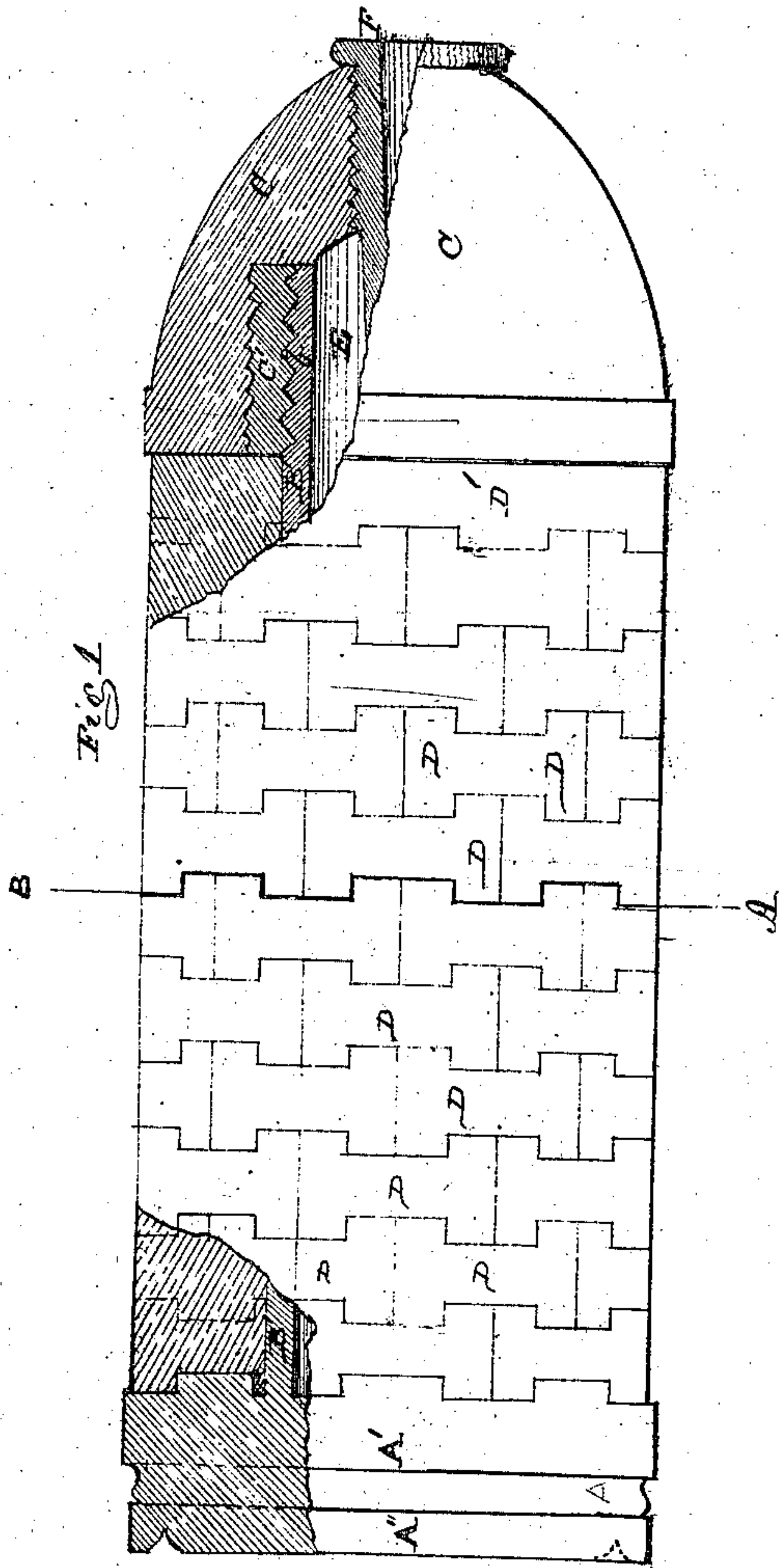
No. 50,585

JOSEPH H. HISSOCK'S

COMBINATION UNION SHELL.

Patented Oct. 17, 1865

Rec'd filed May 10, 1865



WITNESSES.

S. S. Harnestock  
O. Hase.

INVENTOR.

Joseph H. Hissock.  
by his attorney  
S. S. Harnestock



# UNITED STATES PATENT OFFICE.

JOSEPH H. HISCOCK, OF TURNER, MAINE, ASSIGNOR TO HIMSELF, E. A. NICKELS, AND GRANVILLE C. SHAW, OF WASHINGTON, D. C.

## IMPROVEMENT IN EXPLOSIVE SHELLS.

Specification forming part of Letters Patent No. 50,535, dated October 17, 1865.

*To all whom it may concern:*

Be it known that I, JOSEPH H. HISCOCK, of the Veteran Reserve Corps, town of Turner, county of Androscoggin and State of Maine, have invented a new and Improved Shell for Ordnance, which I call the "Union Combination-Shell;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in so constructing a compound shell that its outer wall, surrounding an interior charge-chamber, shall be built up of interlocking symmetrical and uniformly-shaped blocks or segments, promoting its destructive qualities upon bursting, simplifying its construction, promoting economy, and saving labor and time.

In the drawings, Figure 1 represents a side view of the shell, part of its front and rear being removed to show the internal structure. Fig. 2 is a section on line A B; Fig. 3, a front, and Fig. 4, a top or bottom view, of one of the blocks or segments, D.

A' represents the base of the shell, having on its rear or bottom a windage-cup, A'', which can be attached in any suitable way. B' is a hollow cylindrical charge-chamber for the bursting-charge. It may be cast with the base A', but must be made strong enough to avoid breakage before the explosion of the charge within. If preferred, it may be of wrought-iron, the base A' being cast upon it. On its front end is cut a thread or screw, b, onto which the head C of the shell screws, holding the blocks or segments D firmly together. It will be seen from the drawings these blocks, which the outer cylindrical wall of the shell is composed of, are all of the same size and form and are symmetrical—that is, the same on both sides, top, and bottom; hence they can be easily multiplied and built up around the central stem, B',

fitting upon each other snugly, breaking joint, the projections of one fitting into the indentations of the others, those above and below it. The base A' is properly constructed so that the blocks can be built upon it, and a cap-piece, D', also gives a solid and smooth finish on top or in front for the head C to screw down upon.

C' shows a leaden or other suitable nut secured in head C, into which B' or its threads b screw; but the head C may be its own nut by cutting threads in it to fit those on b. The head C is the closing-cover to the charge-chamber B, and there is a suitable loading-hole in this head, in which a time or other fuse, F, can be inserted.

It will be necessary to have the blocks D fit nicely and screw up tightly, forming a strong or solid mass, not to be disturbed by handling or the discharge.

Upon the explosion of the bursting-charge the destructive effect of so many pieces as the wall must be composed of can well be imagined, particularly in firing over masses of troops or raking a vessel; and if fired from a rifled gun the motion of rotation of the projectile will assist in scattering the fragments, consequently in the destructive effect.

I am aware some projectiles have been made the outer walls composed of certain sections, blocks, or rings; but these do not meet the wants of economy or a maximum effect, and I do not claim, broadly, such construction.

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

The use of the interlocking symmetrical and uniformly-shaped blocks or segments A in the outer wall of a shell for ordnance.

JOSEPH H. HISCOCK.

Witnesses:

S. S. FAHNESTOCK,  
G. C. SHAW.