J. M. URQUHART.
Percussion Shell.

No. 202,203. Patented April 9, 1878.

Fig: 1.

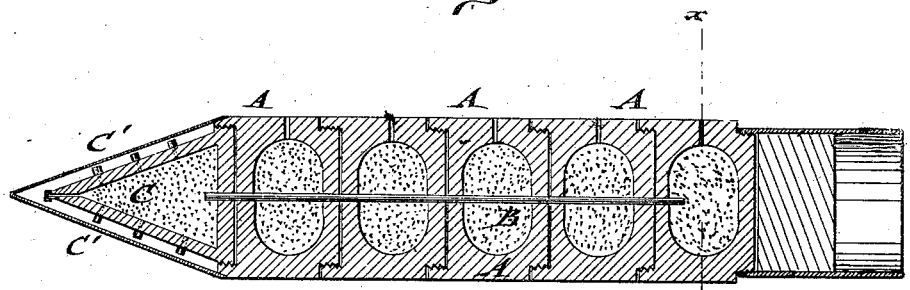
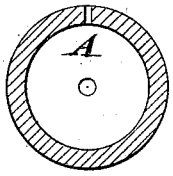
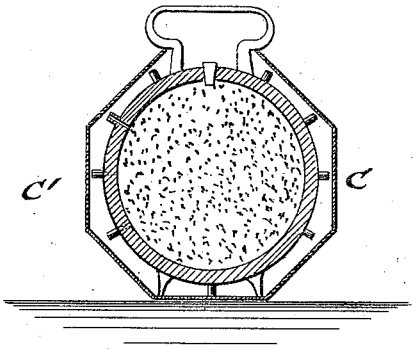


Fig: 3.

Fig: 2.





WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN M. URQUHART, OF JEFFERSON, TEXAS.

IMPROVEMENT IN PERCUSSION-SHELLS.

Specification forming part of Letters Patent No. **202,203**, dated April 9, 1878; application filed February 6, 1878.

To all whom it may concern:

Be it known that I, JOHN MAC URQUHART, of Jefferson, county of Marion, and State of Texas, have invented a new and Improved Percussion-Shell, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved percussion-shell; Fig. 2, a vertical transverse section of the same on line *x x*, Fig. 1; and Fig. 3, a vertical transverse section of a hand-grenade constructed on the same principle.

Similar letters of reference indicate corresponding parts.

The invention relates to an improved percussion-shell that is exploded on striking an object, and which furnishes a number of successive explosions; and the invention consists of a shell made of a number of hollow sections screwed together, charged with powder, and connected by a central longitudinal fuse. The tapering point is also charged with powder, studded with a number of anvils for caps, and inclosed by a sheet-metal case, that explodes the caps on striking an object.

In the drawing, A represents the sections of my improved shell, which are made hollow, and charged with powder through a side hole, which is afterward plugged up.

The shell may be made of any suitable number of sections, that are fitted onto each other and screwed by their annularly-recessed base parts into the threaded flanges of the adjoining section.

A continuous percussion-fuse, B, made of sand-paper and fulminating-powder, or metallic percussion-fuse, runs through holes of all the sections, so that in case the shell should strike laterally or broadside the breaking of the joints will ignite the fuse and secure a successful explosion of all the sections.

The shell may also be supplied with blasting or time fuse instead of percussion-fuse.

The front section or point C is made tapering, and is also charged with powder. The point is studded with a number of anvils and percussion-caps, or arranged with a percussion-fuse, or with both caps and fuse, so as to secure the explosion of the shell. The point is inclosed by a sheet-metal case, C′, that covers the caps, but without pressing on the same when ordinarily handled.

The sheet-metal case yields on striking any substance and explodes then the caps, thus firing and bursting the shells.

The shell will explode even when striking the surface of water, as water furnishes sufficient resistance to spring the sheet-metal case upon the caps.

The base is provided with a block of wood, as used in ordinary shells.

The hand-grenade shown in Fig. 3 is constructed upon the same principle, with radially-arranged anvils, a sheet-metal case, and a handle for the throwing of the same from a balloon or otherwise.

The grenade may be charged with combustibles mixed with the powder, so as to set fire to the shipping, forts, magazines, &c., into which it is thrown.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

A percussion-shell made of jointed and separately-charged sections, connected by a fuse, and of a hollow point, having capped anvils and sheet-metal casing, substantially as described, and for the purpose specified.

JOHN M. URQUHART.

Witnesses:
W. M. HARRISON,
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