



The first contact occurred at the lane, where canister and rifle fire stopped the Confederate assault almost immediately. The main action took place out in the field, where the 5th Indiana had been split in two groups. The forward group consisted of one section – a portion of a battery consisting of two (occasionally one or three) guns commanded by a lieutenant – in the brigade’s front line. This section engaged the Confederates with canister while the Union infantry opened up with their muskets. As the Confederates closed the distance, the gunners increased their firepower still more by double-shotting the guns. This involved removing the propellant bag from a canister round, and stuffing it down the barrel on top of a complete round. It was hard on the barrel, but made the discharge all the more deadly.

Simonson’s other sections were situated behind the infantry line. The distance from those guns to the Confederates, about 600 yards, was too long for canister. By the time the balls struck, they would be slowed by air friction and too spread out to cause many casualties. Simonson’s gunners turned to another type of ammunition, shell, to make their contribution to the fight.

Shell was hollow like canister, but was filled with gunpowder rather than projectiles. The powder was triggered by a fuse, its setting determined by the flight time of the shell. That time was provided by a firing table, a chart of pre-calculated times-to-range carried with each cannon. For example, a shell fired from a *Napoleon* took two-and-a-quarter seconds to reach 700 yards.

Shell

